



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 97968

TO: Ralph J Gitomer
Location: 11b01 / 11d11
Wednesday, July 02, 2003
Art Unit: 1651
Phone: 308-0732
Serial Number: 09 / 469637

From: Jan Delaval
Location: Biotech-Chem Library
CM1-1E07
Phone: 308-4498

jan.delaval@uspto.gov

Search Notes

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

JAN

97968

Access DB#

SEARCH REQUEST FORM RECEIVED

Scientific and Technical Information Center -2 2003

Requester's Full Name: DIGITOMEN Examiner #: 69650 Date: 7/2/03
Art Unit: 1651 Phone Number 30 8-0732 Serial Number: 09/469, 637
Mail Box and Bldg/Room Location: 11301 Results Format Preferred (circle): PAPER DISK E-MAIL
11D11

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures; keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention:

Inventors (please provide full names):

Earliest Priority Filing Date:

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

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Jan Delaval
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jan.delaval@uspto.gov

STAFF USE ONLY

Form with fields for Searcher, Searcher Phone #, Searcher Location, Date Searcher Picked Up, Date Completed, Searcher Prep & Review Time, Clerical Prep Time, Online Time, Type of Search (NA, AA, Structure, Bibliographic, Litigation, Fulltext, Patent Family, Other), and Vendors and cost where applicable (STN, Dialog, Questel/Orbit, Dr.Link, Lexis/Nexis, Sequence Systems, WWW/Internet, Other).

7/2/2003

The deal here is the test finds the enzyme in urine as a screening test for most all cancers. The priority date is 4/26/1996. Lots of enzymes are MMP's such as calpains.

Thanks,

RG

MMP'S ARE CLASS EC 3.4.24
TYPE IV COLLAGENASE, GELATINASES
STROMELYSINS

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=> d his

(FILE 'HOME' ENTERED AT 16:39:29 ON 02 JUL 2003)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 16:39:38 ON 02 JUL 2003

L1. 319 S MMP
L2 1574 S (?METALLOPROTEASE? OR ?METALLOPROTEINASE?)/CNS
L3 532 S (MATRIX(L)?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L4 61 S L1 NOT L2,L3
L5 7 S L4 NOT SQL/FA
L6 54 S L4 NOT L5
L7 1709 S L2-L3,L6
L8 646 S (?GELATINASE? OR ?COLLAGENASE? OR ?STROMELYSIN?)/CNS
L9 2234 S L7,L8
E "E C E.4.24"/CN
L10 2255 S (?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L11 599 S L10 NOT L1-L9
L12 47 S L11 NOT SQL/FA
L13 2833 S L9-L12

FILE 'HCAPLUS' ENTERED AT 16:45:08 ON 02 JUL 2003

L14 29027 S L13
L15 17098 S ?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALLO?(L)(?PRO
L16 10664 S MATRIX(L)(?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALL
L17 8017 S MMP
L18 33659 S L14-L17
E MMP
L19 1660 S E4-E47
L20 33885 S L18,L19
L21 361 S L20 AND URINE
E URINE ANALYSIS/CT
L22 38262 S E3,E5
E E3+ALL
E E5+ALL
L23 80202 S E3
L24 250 S L20 AND L22,L23
L25 361 S L21,L24
L26 165 S L25 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)

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FILE 'REGISTRY' ENTERED AT 16:51:19 ON 02 JUL 2003

L27 20501 S (?PROTEASE? OR ?PROTEINASE?)/CNS
L28 18229 S L27 NOT L13

FILE 'HCAPLUS' ENTERED AT 16:51:34 ON 02 JUL 2003

L29 115014 S L28
L30 140491 S ?PROTEASE? OR ?PROTEINASE?
L31 1638 S L29,L30 AND (URINE OR L22 OR L23)
L32 1079 S L31 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)
L33 1171 S L26,L32
L34 138 S L33 AND (?NEOPLAS? OR ?TUMOR? OR ?TUMOUR? OR ?MALIGN? OR ?MET
E NEOPLASM/CT
L35 26 S L33 AND E2-E30
L36 10 S L33 AND E41-E45,E47,E48,E53-E57
E E3+ALL
L37 11 S L33 AND E3-E8
L38 57 S L33 AND E2+NT
L39 3 S L33 AND E116+NT
L40 8 S L33 AND (E121+NT OR E122+NT)
L41 153 S L34-L40
E DIAGNOSIS/CT
L42 7719 S E5
E E3+ALL

L43 43875 S E2+NT
 E E10+ALL
 L44 10041 S E1
 L45 17 S L33 AND L42-L44
 L46 9 S L41 AND L45
 SEL DN AN 1 3 6 7 8
 L47 5 S E1-E15 AND L46
 L48 4 S L46 NOT L47
 E KIDNEY CANCER/CT
 E E3+ALL
 L49 6810 S E2+NT
 E E2+ALL
 L50 79 S E5
 E SKIN CANCER/CT
 E E3+ALL
 L51 7669 S E2+NT
 E E2+ALL
 L52 209 S E5
 L53 10853 S E30+NT
 E E30+ALL
 L54 400 S E4
 E OVARY CANCER/CT
 E E3+ALL
 L55 10138 S E2+NT
 E E2+ALL
 L56 94 S E5
 E PROSTATE CANCER/CT
 L57 6430 S E10-E14, E16-E17, E22
 L58 11706 S E25-E30
 L59 246 S E33
 E S E39, E40
 E PROSTATE GLAND, DISEASE/CT
 L60 3619 S E5
 E PROSTATE CANCER/CT
 E E3+ALL
 L61 11706 S E2
 E NERVOUS SYSTEM CANCER/CT
 E E9+ALL
 L62 1881 S E2
 E E2+ALL
 E E3+ALL
 L63 683 S E47-E49, E52
 E BREAST CANCER/CT
 E E3+ALL
 L64 31953 S E2
 E MAMMARY GLAND/CT
 L65 10215 S E4, E5, E7, E8, E15, E16, E22
 L66 31953 S E26-E35
 L67 6750 S E40, E41
 E LUNG CANCER/CT
 E E3+ALL
 L68 21137 S E2+NT
 E E2+ALL
 L69 235 S E5
 E RETINAL CANCER/CT
 E RETINA CANCER/CT
 E EYE CANCER/CT
 E E3+ALL
 L70 1381 S E2+NT
 E E2+ALL
 L71 8 S E5
 L72 1489 S E3+NT(L) TUMOR?
 L73 772 S E3+NT(L) CANCER?

E RETINA/CT
 E E3+ALL
 L74 95 S E2(L) (TUMOR? OR NEOPLAS? OR CANCER?)
 E LIVER CANCER/CT
 E E25+ALL
 L75 24777 S E2+NT
 E E2+ALL
 L76 856 S E5
 E PANCREATIC CANCER/CT
 E E54+ALL
 L77 6243 S E2+NT
 E E2+ALL
 L78 21 S E5
 E BLADDER CANCER/CT
 L79 1388 S E12
 E E12+ALL
 E E3+ALL
 E LYMPHOMA/CT
 E E3+ALL
 L80 15103 S E7,E6+NT
 E DIGESTIVE TRACT CANCER/CT
 L81 325 S E7
 E E7+ALL
 E DIGESTIVE TRACT/CT
 L82 242 S E5
 L83 1684 S E29,E30
 E GASTROINTESTIN/CT
 E E27+ALL
 L84 1684 S E2
 L85 31 S L49-L84 AND L33
 L86 4 S L85 AND L42-L44
 E UROGENITAL CANCER/CT
 E E7+ALL
 L87 33122 S E4,E3+NT(L) (CANCER? OR NEOPLAS? OR TUMOR?)
 L88 21 S L87 AND L33
 L89 3 S L88 AND L42-L44
 L90 5 S L47,L86,L89
 L91 43 S L45,L48,L85,L88 NOT L90
 SEL DN AN 3 9 12-14 16-18 21 24 28 32 34-37 39-43
 L92 21 S L91 AND E1-E63
 L93 26 S L90,L92
 L94 113 S L41 NOT L88-L93
 SEL DN AN 2 7 9 16 25 26 47 81 89 90 93 94 95 96 98 101-105 107
 L95 22 S L94 AND E64-E129
 L96 48 S L93,L95 AND L14-L26,L29-L95
 L97 43 S L96 AND (?TUMOR? OR ?TUMOUR? OR ?METAST? OR ?MALIGN? OR ?CANC
 L98 5 S L96 NOT L97
 SEL DN AN 1 5
 L99 2 S L98 AND E130-E135
 L100 45 S L97,L99
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 17:39:20 ON 02 JUL 2003

L101 26 S E136-E161

FILE 'HCAPLUS' ENTERED AT 17:39:40 ON 02 JUL 2003

E MOSES M/AU
 L102 57 S E3,E4,E13-E15
 E FREEMAN M/AU
 L103 136 S E3,E20
 L104 14 S E91
 L105 52 S E108,E109,E112
 E WIEDERSCHAIN D/AU

L106 20 S E4-E6
 L107 39 S L102-L106 AND L20,L29,L30
 L108 7 S L107 AND L31
 L109 49 S L100,L108
 SEL HIT RN L108

FILE 'REGISTRY' ENTERED AT 17:42:19 ON 02 JUL 2003

L110 10 S E1-E10
 L111 26 S L101,L110

=> fil reg

FILE 'REGISTRY' ENTERED AT 17:42:44 ON 02 JUL 2003
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 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8
 DICTIONARY FILE UPDATES: 1 JUL 2003 HIGHEST RN 540721-20-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
 PROPERTIES for more information. See STNote 27, Searching Properties
 in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s l111 and l1-113

L112 11 L111 AND (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR
 L10 OR L11 OR L12 OR L13)

=> s l111 and l27

L113 25 L111 AND L27

=> s l112,l113,l111

L114 26 (L112 OR L113 OR L111)

=> d ide can tot

L114 ANSWER 1 OF 26 REGISTRY COPYRIGHT 20
 RN 157857-21-1 REGISTRY
 CN Proteinase inhibitor, maspin (9CI) (C
 OTHER NAMES:
 CN Maspin
 CN Serine proteinase inhibitor maspin
 MF Unspecified
 CI MAN
 SR CA
 LC STN Files: ADISINSIGHT, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN,
 EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

Hits for
 CAS references

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

119 REFERENCES IN FILE CA (1957 TO DATE)
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 119 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:399519
 REFERENCE 2: 138:384176
 REFERENCE 3: 138:383070
 REFERENCE 4: 138:380512
 REFERENCE 5: 138:378768
 REFERENCE 6: 138:317910
 REFERENCE 7: 138:235743
 REFERENCE 8: 138:219228
 REFERENCE 9: 138:183107
 REFERENCE 10: 138:182964

L114 ANSWER 2 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 148196-69-4 REGISTRY

CN **Proteinase inhibitor, protease-nexin I (9CI)** (CA INDEX NAME)

OTHER NAMES:

CN Glia-derived nexins
 CN Glycoproteins, glia-derived nexins
 CN Glycoproteins, neuroglia-derived nexins
 CN Growth factors (animal), neuroglia-derived neurite extension factors
 CN Neuroglia-derived neurite extension factors animal growth regulators
 CN Neuroglia-derived nexins
 CN Nexins 1
 CN Nexins, glia-derived
 CN Nexins, neuroglia-derived
 CN Plasminogen activator inhibitor PN-1
 CN **Platelet proteinase-nexin I proteins**
 CN PNIP proteins
 CN **Protease-nexin I**
 CN **Proteinase-nexin 1**
 CN **Proteinase-nexin I proteins, platelet**
 CN **Proteinase-nexins I**
 CN Proteins, nexins, 1
 CN Proteins, PNIP
 CN **Proteins, PNIP (proteinase-nexin I, platelet)**
 CN **Proteins, protease nexin I**
 CN **Proteins, proteinase-nexin I, platelet**
 CN **Proteins, proteinase-nexins I**
 CN **Serine protease inhibitor-E2**
 CN SERPINE2
 MF Unspecified
 CI MAN
 SR CA
 LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, PHAR, PROMT, TOXCENTER,
 USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

164 REFERENCES IN FILE CA (1957 TO DATE)

12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

165 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4221
 REFERENCE 2: 138:383344

REFERENCE 3: 138:352059
REFERENCE 4: 138:248894
REFERENCE 5: 138:233860
REFERENCE 6: 138:200825
REFERENCE 7: 138:53397
REFERENCE 8: 137:350625
REFERENCE 9: 137:320904
REFERENCE 10: 137:246407

L114 ANSWER 3 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 146480-36-6 REGISTRY

CN Gelatinase B (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 92,000-Mol.-wt. gelatinase
CN 92,000-Mol.-wt. type IV collagenase
CN 92-kD Gelatinase
CN 92-kDa Gelatinase
CN 92-kDa Type IV collagenase
CN 95 kDa Type IV collagenase/gelatinase
CN Collagenase IV
CN Collagenase type IV
CN E.C. 3.4.24.35
CN Gelatinase MMP 9
CN Matrix metalloprotease 9
CN Matrix metalloproteinase 9
CN MMP 9
CN Type IV collagen metalloproteinase
CN Type IV collagenase
CN Type IV collagenase/gelatinase
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAPLUS, CEN, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

3325 REFERENCES IN FILE CA (1957 TO DATE)

12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3339 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12297
REFERENCE 2: 139:12220
REFERENCE 3: 139:5593
REFERENCE 4: 139:5353
REFERENCE 5: 139:5124
REFERENCE 6: 139:4956
REFERENCE 7: 139:4843
REFERENCE 8: 139:4695

REFERENCE 9: 139:4677

REFERENCE 10: 139:4608

L114 ANSWER 4 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 146480-35-5 REGISTRY

CN Gelatinase A (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 72 kDa Gelatinase

CN 72 kDa Gelatinase type A

CN 72,000-Mol.-wt. gelatinase

CN 72,000-Mol.-wt. type IV collagenase

CN Collagenase IV

CN Collagenase type IV

CN E.C. 3.4.24.24

CN Matrix metalloprotease 2

CN Matrix metalloproteinase 2

CN MMP 2

CN Type IV collagen metalloproteinase

CN Type IV collagenase

CN Type IV collagenase/gelatinase

MF Unspecified

CI MAN

SR CA

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAPLUS, CEN, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

3482 REFERENCES IN FILE CA (1957 TO DATE)

11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3502 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12297

REFERENCE 2: 139:12220

REFERENCE 3: 139:5158

REFERENCE 4: 139:5124

REFERENCE 5: 139:5103

REFERENCE 6: 139:4977

REFERENCE 7: 139:4956

REFERENCE 8: 139:4843

REFERENCE 9: 139:4769

REFERENCE 10: 139:4695

L114 ANSWER 5 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 142243-03-6 REGISTRY

CN Proteinase inhibitor, PAI-2 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cytokines, minactivin

CN Minactivin

CN PAI 2

CN Plasminogen activator inhibitor type 2

CN Plasminogen activator inhibitor type II

CN Plasminogen activator inhibitor-2

CN Plasminogen activator-2

CN Type 2 plasminogen activator inhibitor
DR 143514-72-1
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CAPLUS, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

456 REFERENCES IN FILE CA (1957 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
458 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4614
REFERENCE 2: 139:2771
REFERENCE 3: 138:366651
REFERENCE 4: 138:363865
REFERENCE 5: 138:335704
REFERENCE 6: 138:316031
REFERENCE 7: 138:299091
REFERENCE 8: 138:285553
REFERENCE 9: 138:285114
REFERENCE 10: 138:285070

L114 ANSWER 6 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 141907-41-7 REGISTRY

CN **Proteinase, matrix metallo- (9CI)** (CA INDEX NAME)

OTHER NAMES:

CN **Matrix metalloendoproteinase**

CN **Matrix metalloprotease**

CN **Matrix metalloprotease HIPHUM35**

CN **Matrix metalloproteinase**

CN **Matrix-degrading metalloproteinase**

MF Unspecified

CI MAN

SR CA

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, CA, CAPLUS,
CEN, CHEMCATS, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

2458 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2465 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12251
REFERENCE 2: 139:7161
REFERENCE 3: 139:5124
REFERENCE 4: 139:5103
REFERENCE 5: 139:4431

REFERENCE 6: 139:4430
REFERENCE 7: 139:4337
REFERENCE 8: 139:3984
REFERENCE 9: 139:3873
REFERENCE 10: 139:3165

L114 ANSWER 7 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 140208-24-8 REGISTRY
CN **Proteinase inhibitor, TIMP 1 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN TIMP 1
CN **Tissue inhibitor of metalloproteinase-1**
MF Unspecified
CI MAN
SR CA
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN,
EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1799 REFERENCES IN FILE CA (1957 TO DATE)
35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1806 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5124
REFERENCE 2: 139:4977
REFERENCE 3: 139:4956
REFERENCE 4: 139:4843
REFERENCE 5: 139:4608
REFERENCE 6: 139:4555
REFERENCE 7: 139:4299
REFERENCE 8: 139:2583
REFERENCE 9: 138:400344
REFERENCE 10: 138:400140

L114 ANSWER 8 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 140208-23-7 REGISTRY
CN **Proteinase inhibitor, PAI-1 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN EIP-1 sialoglycoproteins
CN PAI-1
CN Plasminogen activator inhibitor I
CN Plasminogen activator inhibitor type 1
CN Plasminogen activator inhibitor-1
CN Plasminogen activator-inhibiting proteins, 1
CN **Protease inhibitor PAI-1**
CN Sialoglycoproteins, EIP-1
CN Sialoglycoproteins, EIP-1 (epidermal growth factor-induced protein 1)
CN Type 1 plasminogen activator inhibitor
MF Unspecified
CI MAN

SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAPLUS, CIN, EMBASE, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

3412 REFERENCES IN FILE CA (1957 TO DATE)
99 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3419 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4837
REFERENCE 2: 139:4790
REFERENCE 3: 139:4776
REFERENCE 4: 139:4769
REFERENCE 5: 139:4754
REFERENCE 6: 139:4719
REFERENCE 7: 139:4608
REFERENCE 8: 139:4189
REFERENCE 9: 139:4144
REFERENCE 10: 139:2946

L114 ANSWER 9 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 138674-34-7 REGISTRY

CN Proteinase inhibitor, cysteine (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cysteine protease inhibitor

CN Cysteine proteinase inhibitor

CN Thiol proteinase inhibitor

MF Unspecified

CI MAN

SR CA

LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CIN, PROMT,
TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

266 REFERENCES IN FILE CA (1957 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
267 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:381348
REFERENCE 2: 138:351238
REFERENCE 3: 138:318773
REFERENCE 4: 138:314594
REFERENCE 5: 138:299211
REFERENCE 6: 138:285153
REFERENCE 7: 138:283101
REFERENCE 8: 138:276058

REFERENCE 9: 138:236330

REFERENCE 10: 138:216003

L114 ANSWER 10 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 124861-55-8 REGISTRY
CN Proteinase inhibitor, TIMP 2 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN TIMP 2

CN TIMP-2 proteinase inhibitor

CN Tissue inhibitor metalloproteinase-2

DR 127497-59-0

MF Unspecified

CI MAN

SR CA

LC STN Files: ADISINSIGHT, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CANCERLIT, CAPLUS, CIN, DDFU, DRUGU, EMBASE, MEDLINE, PHAR, PROMT,
TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1291 REFERENCES IN FILE CA (1957 TO DATE)

31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1293 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5124

REFERENCE 2: 139:4977

REFERENCE 3: 139:4956

REFERENCE 4: 139:4608

REFERENCE 5: 139:4555

REFERENCE 6: 139:4299

REFERENCE 7: 138:400344

REFERENCE 8: 138:399515

REFERENCE 9: 138:398134

REFERENCE 10: 138:383385

L114 ANSWER 11 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 119345-31-2 REGISTRY

CN Gelatinase, pro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Progelatinase

CN Type IV procollagenase

MF Unspecified

CI MAN

SR CA

LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

54 REFERENCES IN FILE CA (1957 TO DATE)

9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

54 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 135:55550

REFERENCE 2: 133:333153

REFERENCE 3: 132:204836
REFERENCE 4: 129:173622
REFERENCE 5: 129:147271
REFERENCE 6: 129:63704
REFERENCE 7: 125:80274
REFERENCE 8: 124:52190
REFERENCE 9: 123:247554
REFERENCE 10: 123:179356

L114 ANSWER 12 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 86102-31-0 REGISTRY
CN Proteinase inhibitor, TIMP (9CI) (CA INDEX NAME)
OTHER NAMES:

CN Metalloproteinase elastase inhibitor
CN TIMP
CN TIMP metalloproteinase inhibitor
CN TIMP proteinase inhibitor
CN Tissue inhibitor of matrix metalloproteinase
CN Tissue inhibitor of metalloproteinase
MF Unspecified
CI MAN

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA,
CAPLUS, CIN, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
651 REFERENCES IN FILE CA (1957 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
652 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4431
REFERENCE 2: 138:382895
REFERENCE 3: 138:382500
REFERENCE 4: 138:382301
REFERENCE 5: 138:379210
REFERENCE 6: 138:366555
REFERENCE 7: 138:366420
REFERENCE 8: 138:366416
REFERENCE 9: 138:352192
REFERENCE 10: 138:335704

L114 ANSWER 13 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 81669-70-7 REGISTRY
CN Proteinase, metallo- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Acidolysin
CN ATNase

CN Metalloendopeptidase
CN **Metalloendoprotease**
CN Metallopeptidase
CN **Metalloprotease**
CN **Metalloproteinase**
CN N-(2,4)-Dinitrophenylpeptidase
DR 120720-15-2, 120720-16-3, 129292-40-6, 143639-34-3
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CAPLUS, CEN, CHEMCATS, CIN, EMBASE, PROMT, RTECS*, TOXCENTER, USPAT2,
USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

2930 REFERENCES IN FILE CA (1957 TO DATE)
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2937 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:2891
REFERENCE 2: 139:2739
REFERENCE 3: 139:1254
REFERENCE 4: 138:406942
REFERENCE 5: 138:401744
REFERENCE 6: 138:384198
REFERENCE 7: 138:382395
REFERENCE 8: 138:379685
REFERENCE 9: 138:367572
REFERENCE 10: 138:365546

L114 ANSWER 14 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN **78990-62-2** REGISTRY
CN Calpain (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **Calcium-activated neutral protease**
CN **Calcium-activated neutral proteinase**
CN **Calcium-dependent neutral protease**
CN E.C. 3.4.22.17
CN **Proteinase, calcium-activated neutral**
MF Unspecified
CI MAN

LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CAPLUS, CEN, CHEMCATS, CIN, EMBASE, IPA, PROMT, TOXCENTER, USPAT2,
USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

2920 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2921 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5078
REFERENCE 2: 139:4588

REFERENCE 3: 139:2445
REFERENCE 4: 139:1963
REFERENCE 5: 139:256
REFERENCE 6: 138:400208
REFERENCE 7: 138:399225
REFERENCE 8: 138:398150
REFERENCE 9: 138:383237
REFERENCE 10: 138:382769

L114 ANSWER 15 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 78169-47-8 REGISTRY

CN **Proteinase, aspartic (9CI)** (CA INDEX NAME)

OTHER NAMES:

CN **Aspartate protease**

CN **Aspartate proteinase**

CN **Aspartic acid proteinase**

CN Aspartic endopeptidase

CN **Aspartic endoproteinase**

CN Aspartic peptidase

CN **Aspartic protease**

CN **Aspartic proteinase**

CN **Aspartyl endoproteinase**

CN **Aspartyl protease**

CN **Aspartyl proteinase**

CN **Carboxyl protease**

CN **Carboxyl proteinase**

CN GC 106

CN Novozyme 642

DR 9073-79-4, 128826-37-9, 140932-66-7

MF Unspecified

CI MAN

LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN,
CHEMCATS, CHEMLIST, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1788 REFERENCES IN FILE CA (1957 TO DATE)

44 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1793 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:3103
REFERENCE 2: 139:2731
REFERENCE 3: 138:396903
REFERENCE 4: 138:378524
REFERENCE 5: 138:366953
REFERENCE 6: 138:366482
REFERENCE 7: 138:366328
REFERENCE 8: 138:366315

REFERENCE 9: 138:365546

REFERENCE 10: 138:362168

L114 ANSWER 16 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 60616-82-2 REGISTRY

CN Cathepsin L (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Aldrichina grahama cysteine proteinase

CN Cathepsin L1

CN Cathepsin L2

CN E.C. 3.4.22.15

CN Pacific whiting surimi wash water proteinase

MF Unspecified

CI MAN

LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CIN, CSCHEM, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1621 REFERENCES IN FILE CA (1957 TO DATE)

12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1625 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4503

REFERENCE 2: 139:4272

REFERENCE 3: 139:1892

REFERENCE 4: 138:401413

REFERENCE 5: 138:400370

REFERENCE 6: 138:400356

REFERENCE 7: 138:397963

REFERENCE 8: 138:397502

REFERENCE 9: 138:383974

REFERENCE 10: 138:383054

L114 ANSWER 17 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 50936-63-5 REGISTRY

CN Trypsin inhibitor, pancreatic secretory (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Kazal pancreatic secretory trypsin inhibitor

CN Kazal pancreatic trypsin inhibitor

CN Kazal trypsin inhibitor

CN Pancreas secretory trypsin inhibitor

CN Pancreatic secretory trypsin inhibitor

CN Pancreatic trypsin inhibitor (Kazal)

CN Proteinase inhibitor SPINK1

CN PSTI proteinase inhibitor

CN Serine protease inhibitor, Kazal type 1

MF Unspecified

CI MAN

LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CIN, EMBASE, MEDLINE, PROMT, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

267 REFERENCES IN FILE CA (1957 TO DATE)
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
267 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:397922
REFERENCE 2: 138:367096
REFERENCE 3: 138:352148
REFERENCE 4: 138:284721
REFERENCE 5: 138:202802
REFERENCE 6: 138:164674
REFERENCE 7: 138:120926
REFERENCE 8: 137:383188
REFERENCE 9: 137:292720
REFERENCE 10: 137:261138

L114 ANSWER 18 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 37353-41-6 REGISTRY

CN Proteinase, cysteine (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cysteine endopeptidase
CN Cysteine endoprotease
CN Cysteine peptidase
CN Cysteine protease
CN Cysteine proteinase
CN L-Cysteine proteinase
CN Mercapto proteinase
CN Oryzain
CN Papain-like cysteine protease
CN Sulfhydryl endopeptidase
CN Sulfhydryl esterase
CN Sulfhydryl protease
CN Sulfhydryl proteinase
CN Thiol endopeptidase
CN Thiol endoproteinase
CN Thiol protease
CN Thiol proteinase
CN Thioprotease
CN Trigger peptidase
DR 51484-59-4, 116155-86-3, 116412-41-0, 117990-23-5
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
CAPLUS, CEN, CIN, EMBASE, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

3293 REFERENCES IN FILE CA (1957 TO DATE)
31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3304 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:6497
REFERENCE 2: 139:3376

REFERENCE 3: 139:2767
REFERENCE 4: 139:2720
REFERENCE 5: 138:400356
REFERENCE 6: 138:398013
REFERENCE 7: 138:397304
REFERENCE 8: 138:396903
REFERENCE 9: 138:396614
REFERENCE 10: 138:384249

L114 ANSWER 19 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 37259-58-8 REGISTRY

CN **Proteinase, serine (9CI)** (CA INDEX NAME)

OTHER NAMES:

CN Alcalase 3.0T

CN **Bacillus alk. serine proteinase**

CN Bactosol SI

CN Caldolase

CN Cerastobin

CN **Gene easter serine protease**

CN **Herpes simplex virus type 1 proteinase**

CN **Proteinase R**

CN **Proteinase T**

CN Proteins, gene easter

CN Proteins, gene snake

CN Prozyme 6

CN Serine endopeptidase

CN Serine esterase

CN Serine peptidase

CN **Serine protease**

CN **Serine proteinase**

CN **serine proteinase**

CN **Serine-type protease**

CN **Seryl protease**

CN Tryase

DR 139074-63-8, 116036-72-7

MF Unspecified

CI MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,

CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, IFICDB,

IFIPAT, IFIUDB, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

5927 REFERENCES IN FILE CA (1957 TO DATE)

88 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5943 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8074

REFERENCE 2: 139:4192

REFERENCE 3: 139:3758

REFERENCE 4: 139:2713
REFERENCE 5: 139:1658
REFERENCE 6: 139:1640
REFERENCE 7: 139:618
REFERENCE 8: 138:406961
REFERENCE 9: 138:401756
REFERENCE 10: 138:399646

L114 ANSWER 20 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 37205-61-1 REGISTRY
CN **Proteinase inhibitor (9CI)** (CA INDEX NAME)
OTHER NAMES:

CN **Antiproteinase**
CN Fu Gu Tai
CN **Protease inhibitor**
DR 139074-30-9, 144716-05-2, 144132-75-2
MF Unspecified
CI MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAPLUS, CEN, CIN, DIOGENES, EMBASE, IFICDB, IFIPAT, IFIUDB, PROMT,
TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
4840 REFERENCES IN FILE CA (1957 TO DATE)
91 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4847 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8059
REFERENCE 2: 139:5162
REFERENCE 3: 139:2886
REFERENCE 4: 139:601
REFERENCE 5: 138:401502
REFERENCE 6: 138:400414
REFERENCE 7: 138:398741
REFERENCE 8: 138:380414
REFERENCE 9: 138:379210
REFERENCE 10: 138:369171

L114 ANSWER 21 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 9041-92-3 REGISTRY
CN Trypsin inhibitor, .alpha.1- (9CI) (CA INDEX NAME)
OTHER NAMES:

CN **.alpha.-1-Protease inhibitor**
CN **.alpha.1-Antiprotease**
CN **.alpha.1-Antiproteinase**
CN .alpha.1-Antitrypsin
CN .alpha.1-Antitrypsin Pittsburgh mutant
CN .alpha.1-Antitrypsin Portland

CN .alpha.1-AT
 CN **.alpha.1-Protease inhibitor**
 CN **.alpha.1-Proteinase inhibitor**
 CN .alpha.1-Trypsin inhibitor
 CN Antitrypsin Pittsburgh
 CN Prolastin
 CN Respitin
 CN SERPINA1
 DR 9082-50-2, 124542-00-3
 MF Unspecified
 CI COM, MAN
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CAPLUS, CBNB, CEN, CHEMCATS, CHEMLIST, CIN,
 CSCHEM, DDFU, DIOGENES, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT,
 IFIUDB, IPA, MRCK*, NIOSHTIC, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

4985 REFERENCES IN FILE CA (1957 TO DATE)
 283 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 4987 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4865
 REFERENCE 2: 139:2771
 REFERENCE 3: 138:407000
 REFERENCE 4: 138:400024
 REFERENCE 5: 138:399905
 REFERENCE 6: 138:397166
 REFERENCE 7: 138:395890
 REFERENCE 8: 138:395865
 REFERENCE 9: 138:390934
 REFERENCE 10: 138:390629

L114 ANSWER 22 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN **9040-48-6** REGISTRY
 CN **Gelatinase (9CI)** (CA INDEX NAME)

OTHER NAMES:

CN **Collagenase IV**
 CN **Collagenase type IV**
 CN **Type IV collagen metalloproteinase**
 CN **Type IV collagenase**
 CN **Type IV collagenase/gelatinase**
 MF Unspecified
 CI MAN

LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
 CAPLUS, CHEMCATS, CIN, CSCHEM, EMBASE, PIRA, PROMT, TOXCENTER, USPAT2,
 USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1042 REFERENCES IN FILE CA (1957 TO DATE)
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1042 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:385438
REFERENCE 2: 138:378838
REFERENCE 3: 138:367396
REFERENCE 4: 138:348761
REFERENCE 5: 138:336376
REFERENCE 6: 138:325814
REFERENCE 7: 138:319144
REFERENCE 8: 138:300830
REFERENCE 9: 138:297627
REFERENCE 10: 138:284927

L114 ANSWER 23 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 9014-01-1 REGISTRY

CN Subtilisin (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Alcalase
CN Alcalase 0.6L
CN Alcalase 2.0M
CN Alcalase 2.4L
CN Alcalase 2.5L
CN Alcalase 6.0T
CN ALK-enzyme
CN APB-72
CN Bacillopeptidase A
CN Bacillopeptidase B
CN **Bacillus subtilis alkaline proteinase**
CN **Bacillus subtilis Alkaline proteinase**
CN Bioblase SP-15 FG
CN Biopraser
CN Biopraser 30G
CN Biopraser AL 15
CN Biopraser APL 30
CN Biopraser Conc
CN Biopraser PN 4
CN Biopraser SP
CN Biopraser SP 10
CN Biopraser SP 20
CN Biopraser SP 4
CN BLAP 260
CN BLAP S
CN Chirazyme P 1
CN ChiroCLEC CRO
CN ChiroCLEC-BL
CN Colistinase
CN Dafazyme PR B
CN E.C. 3.4.21.14
CN E.C. 3.4.21.62
CN E.C. 3.4.4.16
CN Esperase
CN Esperase 8.0
CN Esperase 8.0L
CN Evertase 24 LDP
CN Extretex

CN Genenase
CN Genenase I
CN Kannase
CN Kazusase
CN **M-Protease**
CN Maxacal
CN Maxacal CX600K
CN Maxacal L
CN Maxatase
CN Nagarse
CN Necrolytin G
CN Novolan T
CN **Protease S**
CN **Protease VIII**
CN **Protease XXVII**
CN **Proteinase, Bacillus subtilis alkaline**
CN **Serine alkaline protease**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY
DR 12626-20-9, 12770-87-5, 9028-05-1, 9031-73-6, 9045-36-7, 9063-47-2,
9067-41-8, 2392-42-9, 148093-32-7, 179530-31-5, 196414-34-3
MF Unspecified
CI COM, MAN
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT,
IFIUDB, IPA, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, TOXCENTER,
ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

5829 REFERENCES IN FILE CA (1957 TO DATE)
350 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5838 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8471
REFERENCE 2: 139:5890
REFERENCE 3: 139:5876
REFERENCE 4: 139:5870
REFERENCE 5: 139:5688
REFERENCE 6: 138:406693
REFERENCE 7: 138:406598
REFERENCE 8: 138:406597
REFERENCE 9: 138:400849
REFERENCE 10: 138:400464

L114 ANSWER 24 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN 9004-06-2 REGISTRY
CN Elastase (9CI) (CA INDEX NAME)
OTHER NAMES:
CN E.C. 3.4.21.11
CN E.C. 3.4.21.36

CN E.C. 3.4.21.37
 CN E.C. 3.4.24.65
 CN E.C. 3.4.4.7
 CN Elaszym
 CN Macrophage metalloelastase
 CN **Matrix metalloprotease 12**
 CN **Matrix metalloproteinase-12**
 CN Medullasin
 CN **MMP 12**
 CN Neutrophil Elastase
 CN Pancreatopeptidase E
 CN Peptidase, pancreato-, E
 CN **Proteinase, bone marrow serine**
 DR 9001-21-2, 139074-64-9, 75603-19-9, 83682-98-8
 MF Unspecified
 CI COM, MAN
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
 CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM,
 DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, NAPRALERT,
 NIOSHTIC, PHAR, PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 7820 REFERENCES IN FILE CA (1957 TO DATE)
 259 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 7832 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:15273
 REFERENCE 2: 139:12251
 REFERENCE 3: 139:12032
 REFERENCE 4: 139:5303
 REFERENCE 5: 139:5124
 REFERENCE 6: 139:4677
 REFERENCE 7: 139:2046
 REFERENCE 8: 139:1152
 REFERENCE 9: 138:400336
 REFERENCE 10: 138:399638

L114 ANSWER 25 OF 26 REGISTRY COPYRIGHT 2003 ACS
 RN 9001-92-7 REGISTRY
 CN **Proteinase (9CI)** (CA INDEX NAME)
 OTHER NAMES:
 CN .alpha.-N-Benzoyl-DL-arginine-p-nitroanilide hydrolase
 CN **537 Acidic protease**
 CN Actinase
 CN Alkalase 2.4L FG
 CN Alkalase 2.5L Type DX
 CN **Alkaline protease-L FG**
 CN ALP 901
 CN Alphamalt BK 5020
 CN Alphamalt LQ 4020
 CN **AO protease**

CN APL 901
 CN Aquatinase E
 CN Arginine esterase
 CN AS 1.398
 CN AS 10
 CN Azocaseinase
 CN BAPAase
 CN BAPNAase
 CN Benzoyl arginine arylamidase
 CN Benzoyl-DL-arginine-p-nitroanilide hydrolase
 CN Biopraxe SP 4FG
 CN **Bioprotease A**
 CN **Bioprotease N 100P**
 CN Biosoft PW
 CN Carbonyl hydrolase
 CN Casein endopeptidase
 CN Caseinase
 CN Cleanase AP 100-PWC
 CN Corolase 7089
 CN Corolase L 10
 CN DA 10
 CN DA 10 (enzyme)
 CN Denatyme AP
 CN Deozyme
 CN Durazyme 16.0L
 CN Endopeptidase
 CN Endopeptidase O
 CN **Endoprotease**
 CN **Endoproteinase**
 CN Enzylase K 40
 CN Enzylon SAL
 CN Enzylon SAL 300
 CN Enzymes, proteolytic
 CN **Esteroproteinase**
 CN Everlase 16L
 CN Everlase 16L Type EX
 CN Fibrinase
 CN Flavorase
 CN Flavourzyme 500 MG
 CN **Fungal Protease P 31000**
 CN **GHPO 525 protease**
 CN **GPR protease**
 CN **Growth-related proteinase**
 CN **HAP Alkaline protease**
 CN **Isofloridoside phosphate synthase-activating proteinase**
 CN **Milk-clotting acid proteinase**
 CN **Neutral proteinase 1398**
 CN **Pathogenesis-related proteinase P 69**
 CN **Pfu Protease S**
 CN **Protease**
 CN **Protease A "Amano"**
 CN **Protease P3**
 CN **Protease S Amano**
 CN **Protease YP-SS**
 CN **Protein p20 proteinase**
 CN **Proteinase SP 446**

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
 DISPLAY
 DR 9001-93-8, 9012-23-1, 9040-76-0, 125498-72-8, 125752-86-5, 123779-18-0,
 124041-97-0, 120038-39-3, 120038-40-6, 105913-13-1, 118901-82-9,
 144906-30-9, 143404-30-2, 143404-41-5, 80804-52-0, 116267-38-0,
 117278-03-2, 117698-27-8, 118390-80-0
 MF Unspecified

CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN,
CSCHEM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB,
IPA, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PLASPEC*, PROMT, RTECS*,
TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**, TSCA**
(*Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
35317 REFERENCES IN FILE CA (1957 TO DATE)
401 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
35347 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:11884
REFERENCE 2: 139:6054
REFERENCE 3: 139:6027
REFERENCE 4: 139:6020
REFERENCE 5: 139:5907
REFERENCE 6: 139:5773
REFERENCE 7: 139:5769
REFERENCE 8: 139:5737
REFERENCE 9: 139:5715
REFERENCE 10: 139:5712

L114 ANSWER 26 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN 9001-12-1 REGISTRY
CN **Collagenase (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Aspergillopeptidase C
CN Azocollase
CN Brachyurin
CN Clostridiopeptidase A
CN Clostridiopeptidase I
CN Clostridiopeptidase II
CN **Clostridium histolyticum collagenase**
CN Collagen peptidase
CN **Collagen protease**
CN **Collagenase A**
CN **Collagenase MMP-1**
CN E.C. 3.4.24.3
CN E.C. 3.4.24.34
CN E.C. 3.4.24.7
CN E.C. 3.4.4.19
CN E.C. 3.4.99.5
CN Euphalyisin
CN **Interstitial collagenase**
CN Iruxol
CN Kollaza
CN Liberase
CN Liberase Blendzyme IV
CN Matrix metalloprotease 1
CN **Matrix metalloprotease MMP-ABT**

CN **Matrix metalloproteinase-1**
CN **Matrix metalloproteinase-18**
CN **Matrix metalloproteinase-8**
CN **Metallocollagenase**
CN **Metalloproteinase-1**
CN **MMP-1**
CN **MMP-8**
CN Morikraz
CN Nucleolysin
CN Peptidase, clostridio-, A
CN **Proteinase, Clostridium histolyticum, A**
CN Santyl
CN Soycollagestin
DR 37288-86-1, 39433-96-0
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
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L109 ANSWER 1 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:293975 HCAPLUS

DN 136:319344

TI Detection of enzyme complexes in biological samples in diagnosis of tissue remodeling-associated conditions

IN Moses, Marsha A.; Yan, Li

PA Children's Medical Center Corporation, USA

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-574

CC 1-1 (Pharmacology)

Section cross-reference(s): 7, 14

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002031507	A2	20020418	WO 2001-US31980	20011015
WO 2002031507	A3	20030605		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, RW: GE, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002011697	A5	20020422	AU 2002-11697	20011015
US 2002081641	A1	20020627	US 2001-977878	20011015 <--
PRAI US 2000-240489P	P	20001013		
US 1996-639373	A	19960426	<--	
WO 2001-US31980	W	20011015		

AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodeling-assocd. conditions, involving the presence of enzyme complexes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **metastatic cancer** by the identification of high mol. wt. enzyme complexes comprising **MMPs**. Thus, **urine of cancer patients** contained 125-kDa complexes of **MMP-9** with lipocalin NGAL. The complexes appear to form in the **urine**. NGAL protected **MMP-9** from degrdn. both in vitro and in cell culture.

ST **MMP9** lipocalin NGAL complex urinalysis **cancer** diagnosis

IT Immunoassay
 (**MMP9**-NGAL complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **Diagnosis**

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- (**cancer**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Arthritis
 Bone, neoplasm
 Digestive tract, neoplasm
 Kidney, neoplasm
 Leukemia
 Liver, neoplasm
 Lung, neoplasm
 Mammary gland, neoplasm
 Nervous system, neoplasm
 Pancreas, neoplasm
 Prostate gland, neoplasm
 Skin, neoplasm
 Urine analysis
 (detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Neoplasm
 (**diagnosis**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Urogenital tract
 (disease, **tumor**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Embryo, animal
 (entoderm, **cancers** derived from; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Immunoassay
 (enzyme-linked immunosorbent assay, **MMP9-NGAL** complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Neoplasm
 (**epithelial**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Test kits
 (for **MMP9-NGAL** complex detection; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Caseins, biological studies
 Fibronectins
 Gelatins, biological studies
 Vitronectin
 RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (in **MMP9-NGAL** complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Proteins
 RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (lipocalin, NGAL, complexes with **MMP's**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Proteins
 RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (lipocalin, complexes with **MMP's**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Embryo, animal
 (mesoderm, **cancers** derived from; detection of enzyme

- complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Immunoassay
(radioimmunoassay, **MMP9**-NGAL complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT **Eye**
(**retina, tumor**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Disease, animal
(tissue remodeling-assocd.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT Collagens, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type IV, in **MMP9**-NGAL complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT **86102-31-0, TIMP 140208-24-8, TIMP 1**
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(complexes with **MMP**'s; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT **9001-92-7D, Proteinase, complexes 37259-58-8D, Serine proteinase, complexes 141907-41-7D, Matrix metalloproteinase, complexes 146480-36-6D, Matrix metalloproteinase 9, complexes**
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- IT **9001-90-5, Plasmin 9001-91-6, Plasminogen**
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in **MMP9**-NGAL complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)
- L109 ANSWER 2 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:763690 HCAPLUS
DN 136:52013
TI The high molecular weight urinary **matrix metalloproteinase (MMP)** activity is a complex of gelatinase B/**MMP**-9 and neutrophil gelatinase-associated lipocalin (NGAL). Modulation of **MMP**-9 activity by NGAL
AU Yan, Li; Borregaard, Niels; Kjeldsen, Lars; **Moses, Marsha A.**
CS Department of Surgery, Children's Hospital, Harvard Medical School, Boston, MA, 02115, USA
SO Journal of Biological Chemistry (2001), 276(40), 37258-37265
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB Detection of **matrix metalloproteinase (MMP)** activities in the **urine** from patients with a variety of cancers has been closely correlated to disease status. Among these activities, the presence of a group of high mol. wt. (HMW) **MMPs** independently serves as a multivariate predictor of the metastatic phenotype (1). The identity of these HMW **MMP** activities has remained unknown despite their novelty and their potentially important

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applications in non-invasive cancer diagnosis and/or prognosis. Here, we report the identification of one of these HMW urinary MMPs of .apprx.125-kDa as being a complex of gelatinase B (MMP-9) and neutrophil gelatinase-assocd. lipocalin (NGAL). Multiple biochem. approaches verified this identity. Anal. using substrate gel electrophoresis demonstrated that the 125-kDa urinary MMP activity co-migrates with purified human neutrophil MMP-9.cntdot.NGAL complex. The 125-kDa urinary MMP-9.cntdot.NGAL complex was recognized by a purified antibody against human NGAL as well as by a monospecific antihuman MMP-9 antibody. Furthermore, these same two antibodies were independently capable of specifically immunopptg. the 125-kDa urinary MMP activity in a dose-dependent manner. In addn., the complex of MMP-9.cntdot.NGAL could be reconstituted in vitro by mixing MMP-9 and NGAL in gelatinase buffers with pH values in the range of urine and in normal urine as well. Finally, the biochem. consequences of the NGAL and MMP-9 interaction were investigated both in vitro using recombinant human NGAL and MMP-9 and in cell culture by overexpressing NGAL in human breast carcinoma cells. Our data demonstrate that NGAL is capable of protecting MMP-9 from degrdn. in a dose-dependent manner and thereby preserving MMP-9 enzymic activity. In summary, this study identifies the 125-kDa urinary gelatinase as being a complex of MMP-9 and NGAL and provides evidence that NGAL modulates MMP-9 activity by protecting it from degrdn.

- ST **MMP9** lipocalin prognosis diagnosis breast cancer
 IT Gene, animal
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (MMP-2; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (MMP-9; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (TIMP; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Diagnosis
 (cancer; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Mammary gland, neoplasm
 (carcinoma; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Proteins
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (lipocalin, neutrophil gelatinase-assocd.; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (lipocalin; urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT Human
 Neutrophil
 Prognosis
 Tumor markers
Urine analysis
 (urine MMP-9-lipocalin complex in human breast cancer diagnosis and prognosis)
- IT 86102-31-0, TIMP 146480-35-5, Gelatinase A

RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (urine MMP-9-lipocalin complex in human breast
 cancer diagnosis and prognosis)
 IT 146480-36-6, Matrix metalloproteinase 9
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (urine MMP-9-lipocalin complex in human breast
 cancer diagnosis and prognosis)

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L109 ANSWER 3 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:673240 HCAPLUS

DN 134:667

TI Aldosterone modulates plasminogen activator inhibitor-1 and
 glomerulosclerosis in vivo

AU Brown, Nancy J.; Nakamura, Shinya; Ma, LiJun; Nakamura, Ikuko; Donnert,
 Ellen; Freeman, Michael; Vaughan, Douglas E.; Fogo, Agnes B.

CS Departments of Medicine and Pharmacology, Pathology, and Radiology,
 Vanderbilt University Medical Center, Nashville, TN, USA

SO Kidney International (2000), 58(3), 1219-1227
 CODEN: KDYIA5; ISSN: 0085-2538

PB Blackwell Science, Inc.

DT Journal

LA English

CC 2-4 (Mammalian Hormones)

AB Aldosterone promotes nephrosclerosis in several rat models, whereas
 aldosterone receptor antagonism blunts the effect of activation of the
 renin-angiotensin-aldosterone system (RAAS) on nephrosclerosis,
 independent of effects on blood pressure. Based on recent findings
 linking activation of the RAAS with impaired fibrinolytic balance, the
 authors hypothesized that aldosterone induces sclerosis through effects on
 plasminogen activator inhibitor-1 (PAI-1), the major physiol. inhibitor of
 plasminogen activation. The authors examd. the effect of aldosterone
 antagonism on the development of sclerosis and on renal PAI-1 expression
 following radiation injury in the rat. Following a single dose of 12 Gy

to the kidneys, male Sprague-Dawley rats were treated with placebo, the aldosterone antagonist spironolactone (4.5 mg/day by time-release s.c. pellet), the angiotensin type 1 receptor antagonist L158-809 (AT1RA; 80 mg/L drinking water), or combined spironolactone and AT1RA. The results revealed that rats treated with placebo developed significant proteinuria and nephrosclerosis 12 wk following radiation assocd. with hypertension. Kidney PAI-1 mRNA expression was increased eightfold ($P < 0.001$ vs. nonradiated controls). Spironolactone alone had no effect on blood pressure (systolic blood pressure 149.0 ± 5.4 mm Hg) compared with placebo (151.6 ± 11.2 mm Hg, $P = \text{NS}$), whereas AT1RA alone (107.7 ± 8.9 mm Hg, $P = 0.013$ vs. placebo) or in combination therapy (102.1 ± 6.2 mm Hg, $P = 0.001$ vs. placebo) lowered blood pressure. Both the AT1RA and spironolactone decreased proteinuria following radiation ($P < 0.001$ vs. placebo for either drug), and the combination of AT1RA + spironolactone had a greater effect on proteinuria than spironolactone alone ($P = 0.003$). Aldosterone antagonism significantly decreased ($P = 0.016$ vs. placebo) and AT1RA virtually abolished ($P = 0.001$ vs. placebo) the development of sclerosis. Spironolactone significantly decreased PAI-1 mRNA expression in the kidneys of radiated animals (PAI-1 mRNA/GAPDH ratio 0.39 ± 0.13 vs. placebo 0.84 ± 0.05 , $P = 0.006$), and there was a significant correlation between the degree of sclerosis and the level of PAI-1 immunostaining within individual rats ($R^2 = 0.97$, $P < 0.0001$). In conclusion, this study is, to the authors' knowledge, the first to demonstrate that aldosterone regulates PAI-1 expression in vivo, and supports the hypothesis that aldosterone induces renal injury through its effects on PAI-1 expression.

- ST aldosterone angiotensin receptor PAI1 glomerulosclerosis kidney rat
 IT Angiotensin receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (AT1; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT Blood pressure
 Blood serum
 Renin-angiotensin system
 Urine
 (aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT Mineralocorticoid receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT Kidney, disease
 (glomerulosclerosis; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT Kidney, disease
 (nephrosclerosis; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT Proteins, general, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (proteinuria; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT **140208-23-7**, Plasminogen activator inhibitor 1
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PROC (Process)
 (aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)
- IT 52-39-1, Aldosterone
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L109 ANSWER 4 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:169339 HCAPLUS

DN 132:204836

TI Gelatinase enzyme screen for breast cancer

IN Moses, Marsha A.; Freeman, Michael R.;
Wiederschain, Dmitri

PA The Children's Medical Center Corp., USA

SO U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 639,373.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-37

NCL 435023000

CC 7-1 (Enzymes)

Section cross-reference(s): 14

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6037138	A	20000314	US 1997-843095	19970425 <--
	CA 2252648	AA	19971106	CA 1997-2252648	19970425 <--

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- PRAI US 2002081641 A1 20020627 US 2001-977878 20011015 <--
 US 1996-639373 A2 19960426 <--
 US 2000-240489P P 20001013
- AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodelling-assocd. conditions, involving the presence of enzymes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **cancer, metastatic cancer**, and obstructive and degenerative conditions. In the claims, a gelatinase is detected in **urine** for facilitating the diagnosis of breast **cancer**.
 A gelatinase of about 125 kDa was detected in the **urine** of 5 out of 9 specimens obtained from **metastatic breast cancer** patients. Gelatinase of this size was not obsd. in **urine** samples of other subjects.
- ST gelatinase enzyme breast **cancer** diagnosis
 IT Caseins, biological studies
 Gelatins, biological studies
 Vitronectin
 RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (as zymogram substrate; gelatinase enzyme screen for breast **cancer**).
- IT **Prostate gland**
 (benign hyperplasia; gelatinase enzyme screen for breast **cancer**)
- IT Immunoassay
 (enzyme-linked immunosorbent assay; gelatinase enzyme screen for breast **cancer**)
- IT Electrophoresis
 Immunoassay
Neoplasm
 Polyacrylamide gel electrophoresis
 Statistical analysis
Urine analysis
 (gelatinase enzyme screen for breast **cancer**)
- IT **Neoplasm**
 (metastasis; gelatinase enzyme screen for breast **cancer**)
- IT **Mammary gland**
 (neoplasm, metastasis; gelatinase enzyme screen for breast **cancer**)
- IT **Mammary gland**
Prostate gland
 (neoplasm; gelatinase enzyme screen for breast **cancer**)
- IT Immunoassay
 (radioimmunoassay; gelatinase enzyme screen for breast **cancer**)
- IT Collagens, biological studies
 RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (type IV, as zymogram substrate; gelatinase enzyme screen for breast **cancer**)
- IT **9040-48-6, Gelatinase**
 RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 (125,000-mol.-wt.; gelatinase enzyme screen for breast **cancer**)
- IT 9001-90-5, Plasmin 9001-91-6, Plasminogen

RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(as zymogram substrate; gelatinase enzyme screen for breast cancer)

IT 141907-41-7, Matrix metalloproteinase
146480-35-5, Gelatinase A 146480-36-6, Gelatinase B
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(gelatinase enzyme screen for breast cancer)

IT 119345-31-2, Progelatinase
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(gelatinase enzyme screen for breast cancer)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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- (5) Wright; US 5639656 1997 HCAPLUS
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L109 ANSWER 5 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1999:672012 HCAPLUS

DN 131:318276

TI Regulation of angiostatin production by **matrix metalloproteinase-2** in a model of concomitant resistance

AU O'Reilly, Michael S.; Wiederschain, Dmitri; Stetler-Stevenson, William G.; Folkman, Judah; Moses, Marsha A.

CS Laboratory of Surgical Research, Department of Surgery, The Children's Hospital, Boston, MA, 02115, USA

SO Journal of Biological Chemistry (1999), 274(41), 29568-29571
CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

CC 2-10 (Mammalian Hormones)

AB The authors have previously reported the identification of the endogenous angiogenesis inhibitor angiostatin, a specific inhibitor of endothelial cell proliferation in vitro and angiogenesis in vivo. In the authors' original studies, the authors demonstrated that a Lewis lung carcinoma (LLC-LM) primary tumor could suppress the growth of its metastases by generating angiostatin. Angiostatin, a 38-kDa internal fragment of plasminogen, was purified from the serum and **urine** of mice bearing LLC-LM, and its discovery provides the first proven mechanism for concomitant resistance. Subsequently, the authors have shown that systemic administration of angiostatin can regress a wide variety of malignant tumors in vivo. However, at the time of the authors' initial discovery of angiostatin, the source of the protein was unclear. The authors hypothesized that the tumor or stromal cells might produce an enzyme that could cleave plasminogen sequestered by the primary tumor into angiostatin. Alternatively, the authors speculated that the tumor cells might express angiostatin. By Northern anal., however, the authors have found no evidence that the tumor cells express angiostatin or other fragments of plasminogen (data not shown). The authors now report that gelatinase A (**matrix metalloproteinase-2**), produced directly by the LLC-LM cells, is responsible for the prodn. of angiostatin, which suppresses the growth of metastases in the authors' original model.

ST angiostatin **matrix metalloproteinase** plasminogen

- IT Blood vessel
(endothelium; regulation of angiostatin prodn. from plasminogen by
matrix metalloproteinase-2 in a model of concomitant
resistance)
- IT Proliferation inhibition
(regulation of angiostatin prodn. from plasminogen by **matrix**
metalloproteinase-2 in a model of concomitant resistance)
- IT 146480-35-5, Gelatinase A
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); BIOL (Biological study)
(regulation of angiostatin prodn. from plasminogen by **matrix**
metalloproteinase-2 in a model of concomitant resistance)
- IT 86090-08-6P, Angiostatin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); MFM (Metabolic formation); PUR (Purification or
recovery); BIOL (Biological study); FORM (Formation, nonpreparative); PREP
(Preparation)
(regulation of angiostatin prodn. from plasminogen by **matrix**
metalloproteinase-2 in a model of concomitant resistance)
- IT 9001-91-6, Plasminogen
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(regulation of angiostatin prodn. from plasminogen by **matrix**
metalloproteinase-2 in a model of concomitant resistance)
- RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (5) Couet, J; J Biol Chem 1996, V271, P4545 HCAPLUS
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L109 ANSWER 6 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:223704 HCAPLUS

DN 129:2334

TI Increased incidence of **matrix metalloproteinases** in
urine of cancer patients

AU Moses, Marsha A.; Wiederschain, Dmitri; Loughlin,
Kevin R.; Zurakowski, David; Lamb, Carolyn C.; Freeman, Michael R.

CS Laboratory for Surgical Research, Children's Hospital, Boston, MA, 02115, USA

SO Cancer Research (1998), 58(7), 1395-1399
CODEN: CNREA8; ISSN: 0008-5472

PB American Association for Cancer Research

DT Journal

LA English

CC 9-7 (Biochemical Methods)
Section cross-reference(s): 14

AB **Matrix metalloproteinases (MMPs)** have been implicated in mechanisms of metastasis in exptl. cancer models and in human malignancies. In this study, we used substrate gel electrophoresis (zymog.) to det. the frequency of detection of **MMPs** in **urine** of patients with a variety of cancers. Three mol. wt. classes of urinary **MMPs**, Mr 72,000, Mr 92,000, and high mol. wt. (Mr .gtoreq. 15,000) species, were detected reproducibly and correlated with disease status. The Mr 72,000 and Mr 92,000 species were identified as **MMP-2** and **MMP-9**, resp., by Western blot anal. The presence of biol. active **MMP-2** ($P < 0.001$) or **MMP-9** ($P = 0.002$) was an independent predictor of organ-confined cancer, and the high mol. wt. species ($P < 0.001$) was an independent predictor of metastatic cancer. This is the first study to demonstrate that anal. of urinary **MMPs** may be useful in detg. disease status in a variety of human cancers, both within and outside of the urinary tract.

ST **urine matrix metalloproteinase** detn gel electrophoresis

IT Gel electrophoresis
Neoplasm
Urine analysis
(increased incidence of **matrix metalloproteinases** in **urine** of cancer patients)

IT **141907-41-7, Matrix metalloproteinase**
146480-35-5, MMP 2 146480-36-6, MMP
9
RL: ANT (Analyte); ANST (Analytical study)
(increased incidence of **matrix metalloproteinases** in **urine** of cancer patients)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L109 ANSWER 7 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:102243 HCAPLUS

- DN **128:241227**
- TI Fluorescence labeling of thiol **proteinase** inhibitors extracted from **urine** of colorectal **cancer** patients
- AU Gutowicz, Jan; Michalak, Krystyna; Pola, Andrzej; Berdowska, Izabela; Siewinski, Maciej
- CS Department of Biophysics, Wroclaw University of Medicine, Wroclaw, 50-368, Pol.
- SO Current Topics in Biophysics (1996), 20(2), 144-148
CODEN: CTOBEU; ISSN: 1232-9630
- PB Wydawnictwo Protex
- DT Journal
- LA English
- CC 7-5 (Enzymes)
Section cross-reference(s): 14
- AB Role of cysteine endopeptidases in **carcinogenesis** is a well-documented fact. These enzymes are esp. important in penetration processes of **tumor** cells which lead to **metastasis**. In a no. of studies in vitro and in vivo, it has been shown that the activity of the peptidases can be regulated by specific protein inhibitors and activators. Levels of the inhibitors and the activators in an organism are likely related to activation of self-defense mechanisms. In many cases enhanced level of the inhibitors has been obsd. in body fluids of **cancer** patients. In this work a method of fluorescence labeling of the inhibitors isolated from **urine** of patients with colorectal **cancer** was evaluated. The reaction of o-phthaldialdehyde with protein amino groups was used for the labeling procedure. The reaction results in prodn. of highly fluorescent isoindole derivs. of the proteins. Efficient energy transfer between native protein fluorophores and the incorporated probe was proved. This allows monitoring of conformational changes upon intermol. interactions. The labeling by o-phthaldialdehyde was compared with the labeling with fluorescamine. Fluorescence labeling of the inhibitors gives new possibilities in investigation of the mechanisms of cysteine peptidase inhibition.
- ST fluorescence labeling thiol **proteinase** inhibitor **urine** ; colorectal **cancer urine proteinase** inhibitor labeling; **proteinase** inhibitor fluorescence conformation **urine cancer**
- IT Intestine, **neoplasm**
(colorectal; fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
- IT **Urine**
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
- IT Conformation
(protein; fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
- IT **138674-34-7**, Thiol **proteinase** inhibitor
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
- IT 643-79-8; o-Phthaldialdehyde
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
- RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

gitomer - 09 / 469637

- RE
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 - (6) Michalak, K; FEBS Lett 1987, V219, P233 HCAPLUS
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 - (10) Siewinski, M; Cancer Biochem Biophys 1991, V12, P33 HCAPLUS
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L109 ANSWER 8 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:740385 HCAPLUS

DN 128:1455

TI Non-invasive enzyme screen for tissue remodeling-associated conditions

IN Moses, Marsha A.; Freeman, Michael R.;

PA Wiederschain, Dmitri
Children's Medical Center Corporation, USA; Moses, Marsha A.; Freeman,
Michael R.; Wiederschain, Dmitri

SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-574
ICS G01N033-564; G01N033-573

CC 7-1 (Enzymes)
Section cross-reference(s): 14

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9741441	A1	19971106	WO 1997-US6909	19970425 <--
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2252648	AA	19971106	CA 1997-2252648	19970425 <--
AU 9726819	A1	19971119	AU 1997-26819	19970425 <--
EP 900381	A1	19990310	EP 1997-918808	19970425 <--
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2000510949	T2	20000822	JP 1997-539033	19970425 <--
US 2002081641	A1	20020627	US 2001-977878	20011015 <--
PRAI US 1996-639373	A2	19960426 <--		
WO 1997-US6909	W	19970425		
US 2000-240489P	P	20001013		

AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodeling-assocd. conditions, involving the presence of enzymes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **cancer, metastatic cancer**, and obstructive and degenerative conditions.

ST noninvasive enzyme screen tissue

IT Enzymes, biological studies
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (Matrix-digesting; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Prostate gland**
 (benign hyperplasia; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Urogenital tract**
 (cancer; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT Immunoassay
 (enzyme-linked immunosorbent assay; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Neoplasm**
 (metastasis; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Digestive tract**
Mammary gland
Nervous system
Prostate gland
 (neoplasm; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Diagnosis**
 Immunoassay
Kidney, neoplasm
Liver, neoplasm
Lung, neoplasm
Neoplasm
Pancreas, neoplasm
Skin, neoplasm
Urine analysis
 (non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT Enzymes, biological studies
 Zymogens
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT Caseins, uses
 Fibronectins
 Gelatins, uses
 Vitronectin
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT Immunoassay
 (radioimmunoassay; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **Eye**
 (retina, cancer; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT Collagens, uses
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (type IV; non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **9001-92-7, Protease 9040-48-6, Type IV collagenase 37259-58-8, Serine protease 141907-41-7, Matrix metalloproteinase**
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (non-invasive enzyme screen for tissue remodeling-assocd. conditions)

IT **9001-90-5, Plasmin 9001-91-6, Plasminogen**
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

gitomer - 09 / 469637

(non-invasive enzyme screen for tissue remodeling-assocd. conditions)

L109 ANSWER 9 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:125141 HCAPLUS

DN 126:194959

TI Urinary excretion of proteolyzed .alpha.1-antitrypsin: specificity, quantitation, and relation to therapy response in patients with acute myeloid leukemia

AU Dengler, Robert; Plewan, Andreas; Muenstermann, Ursula; Busch, Raymonde; Eger, Gerhard; Emmerich, Bertold

CS Med. Klinik Innenstadt, Univ. Munchen, Munich, 80336, Germany

SO Clinical Cancer Research (1995), 1(2), 199-205

CODEN: CCREF4; ISSN: 1078-0432

PB American Association for Cancer Research

DT Journal

LA English

CC 1-6 (Pharmacology)

AB During remission induction chemotherapy, a 41-kDa cleavage product of .alpha.1-antitrypsin (.alpha.1-AT41) can be found in the urine of patients with acute myeloid leukemia. By using immunoblotting with antibodies against this protein, 27 patients with acute myeloid leukemia were screened for the excretion of this fragment and the amt. of .alpha.1-AT41 compared with treatment response assessed by therapy-induced cytoredn. in the bone marrow and time to reach remission. Patients with acute lymphoblastic leukemia, malignant lymphomas, and solid tumors receiving chemotherapy, patients with nonmalignant diseases like sepsis and kidney dysfunction, and healthy subjects were probed to evaluate the specificity of this phenomenon. In 74% of the acute myeloid leukemia patients, the truncated inhibitor was detected. Mean concn. of peak excretion was found to be 6.7 .mu.g/mg creatinine (range, 1.1-41 .mu.g/mg). Among the patients treated with induction chemotherapy, those who responded completely (<5% residual marrow blast cells) exhibited significantly higher .alpha.1-AT41 concns. than the nonresponders (P < 0.03). Patients who showed a partial response (6-25% residual blasts) excreted intermediate values of the protein. The probability of median time to reach remission was 40 days in patients excreting the truncated inhibitor in measurable amts. compared to 100 days in patients neg. for .alpha.1-AT41 (P < 0.02). The 41-kDa fragment was also found in one of 10 patients with acute lymphoblastic leukemia and 3 of 18 lymphoma patients but not in those with solid tumors, infections, or kidney disease or in healthy individuals.

ST antitrypsin antileukemic

IT Antitumor agents

(leukemia; urinary excretion of proteolyzed .alpha.1-antitrypsin and therapy response in humans with acute myeloid leukemia)

IT 9041-92-3, .alpha.1-Antitrypsin

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(urinary excretion of proteolyzed .alpha.1-antitrypsin and therapy response in humans with acute myeloid leukemia)

L109 ANSWER 10 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:52365 HCAPLUS

DN 126:129971

TI The value of urine cysteine proteinase and serum CA125 measurement in monitoring the treatment of malignant ovarian tumor

AU Gao, Guolan; Peng, Zhilan; He, Bin; Huang, Jianmin

CS Dep. Obstetrics Gynecol., Second Affiliated Hosp., West China Univ. Med. Scis., Chengdu, 610041, Peop. Rep. China

SO Huaxi Yike Daxue Xuebao (1996), 27(3), 291-294

CODEN: HYDXET; ISSN: 0257-7712

gitomer - 09 / 469637

PB Huaxi Yike Daxue
 DT Journal
 LA Chinese
 CC 14-1 (Mammalian Pathological Biochemistry)
 AB **Urine cysteine proteinase (UCP) and serum CA125 were measured in 40 patients with malignant ovarian tumor (malignant group), 40 patients with benign ovarian tumor (benign group), and 40 normal control (normal group). 28 Patients in the malignant group underwent UCP and CA125 measurement pre-operation, post-operation, and during three course of chemotherapy. The enzyme activity of UCP in the malignant group was significantly higher than that in the benign and normal groups (or 0.01). The values of UCP in patients with malignant tumor of stages II-IV were significantly higher compared with those of stages I-II (0.05). The activity of UCP and CA125 value were gradually decreased with chemotherapy.**

ST **cysteine proteinase CA125 antigen ovary cancer**
 IT **Ovary, neoplasm (carcinoma; urine cysteine proteinase and serum CA125 measurement in monitoring treatment of malignant ovarian tumor)**

IT Blood serum
Ovary, neoplasm
Prognosis
Tumor markers
Urine (urine cysteine proteinase and serum CA125 measurement in monitoring treatment of malignant ovarian tumor)

IT CA 125 (carbohydrate antigen)
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(urine cysteine proteinase and serum CA125 measurement in monitoring treatment of malignant ovarian tumor)

IT **37353-41-6, Cysteine proteinase**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(urine cysteine proteinase and serum CA125 measurement in monitoring treatment of malignant ovarian tumor)

L109 ANSWER 11 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1996:516550 HCAPLUS
 DN 125:162765
 TI Monoclonal antibody to tissue inhibitor of metalloproteinase-1 (TIMP-1) for diagnosis of urinary system cancer
 IN Kuroda, Kazuhiko; Kato, Masatoshi
 PA Morinaga & Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM G01N033-574
 ICS G01N033-493; G01N033-573
 CC 9-10 (Biochemical Methods)
 Section cross-reference(s): 14, 15

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08136548	A2	19960531	JP 1994-301616	19941111 <--
PRAI JP 1994-301616		19941111 <--		

- AB Urinary TIMP-1 is detd. by immunoassay with monoclonal anti-TIMP-1 antibody. Urinary TIMP-1 is used as an indicator for diagnosis of urinary tract **cancer** such as bladder **cancer**, kidney **cancer**, or ureter **cancer**.
- ST tissue inhibitor of **metalloproteinase-1** antibody; monoclonal antibody TIMP1 urinary system **cancer**
- IT **Kidney, neoplasm**
Urine analysis
(monoclonal antibody to tissue inhibitor of **metalloproteinase-1** or TIMP-1 for diagnosis of urinary system **cancer**)
- IT Antibodies
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, monoclonal antibody to tissue inhibitor of **metalloproteinase-1** or TIMP-1 for diagnosis of urinary system **cancer**)
- IT **Bladder**
Urinary tract
(neoplasm, monoclonal antibody to tissue inhibitor of **metalloproteinase-1** or TIMP-1 for diagnosis of urinary system **cancer**)
- IT **140208-24-8**, Tissue inhibitor of **metalloproteinase-1**
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal antibody to tissue inhibitor of **metalloproteinase-1** or TIMP-1 for diagnosis of urinary system **cancer**)

L109 ANSWER 12 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:494700 HCAPLUS

DN 125:162734

TI Methods for detection of an analyte

IN Bogart, Gregory R.; Moddel, Garret R.; Maul, Diana M.; Etter, Jeffrey B.; Crosby, Mark

PA Biostar, Inc., USA

SO U.S., 71 pp., Cont.-in-part of U.S. Ser. No. 924343, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-70

ICS G01N033-53; G01N033-543; G01N021-00

NCL 435005000

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 3, 7, 15, 73

FAN.CNT 14

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 5541057	A	19960730	US 1993-75952	19930610	<--
	AU 9179004	A1	19921021	AU 1991-79004	19910320	<--
	AU 653940	B2	19941020			
	EP 539383	A1	19930505	EP 1991-910056	19910320	<--
	EP 539383	B1	19960918			
	R: BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE					
	JP 05506936	T2	19931007	JP 1991-509344	19910320	<--
	JP 3193373	B2	20010730			
	ES 2094224	T3	19970116	ES 1991-910056	19910320	<--
	JP 2001235473	A2	20010831	JP 2000-287242	19910320	<--
	EP 1126278	A2	20010822	EP 2001-108521	19930610	<--
	EP 1126278	A3	20011017			
	R: ES, FR, GB, IT, SE					
	JP 2002116208	A2	20020419	JP 2001-236186	19930610	<--
	JP 2002122601	A2	20020426	JP 2001-236166	19930610	<--
	JP 2002122603	A2	20020426	JP 2001-236198	19930610	<--

	JP 2002139498	A2	20020517	JP 2001-236144	19930610 <--
	US 5639671	A	19970617	US 1995-412600	19950328 <--
	US 5629214	A	19970513	US 1995-456040	19950531 <--
	US 5869272	A	19990209	US 1995-455652	19950531 <--
	JP 10288616	A2	19981027	JP 1998-5911	19980114 <--
	JP 2951300	B2	19990920		
PRAI	US 1989-408291	B2	19890918	<--	
	US 1992-873097	B2	19920424	<--	
	US 1992-924343	B2	19920731	<--	
	JP 1990-513789	A3	19900918	<--	
	EP 1991-910056	A	19910320	<--	
	JP 1991-509344	A3	19910320	<--	
	WO 1991-US1781	A	19910320	<--	
	US 1992-923048	B2	19920731	<--	
	EP 1993-915341	A3	19930610	<--	
	JP 1994-505280	A3	19930610	<--	
	US 1993-75952	A3	19930610	<--	
	US 1993-76319	B1	19930610	<--	
AB	This invention relates to devices that produce a detectable attenuation of the spectral characteristic of light impinging on the devices by thin-film phenomena. Interference phenomena are central to the devices and methods of the invention. The presence or amt. of an analyte of interest (e.g., rheumatoid factor, viral antigens, Streptococcus Group A antigen, allergens, HIV I or II, etc.) in a sample (e.g., blood, urine , spinal fluid, gastric wash, vaginal secretions, etc.) is found by using a substrate having an optically active surface exhibiting a first color in response to light impinging thereon and exhibiting a second color comprising a combination of wavelengths of light different from the first color or comprising an intensity of at least one wavelength of light different from the first color in response to the light when the analyte is present on the surface. Then the optically active surface is contacted with a sample potentially comprising the analyte of interest under conditions in which the analyte can interact with the optically active surface to cause the optically active surface to exhibit the second color when the analyte is present. The devices permit detection of extremely small quantities of analyte in a sample, in amts. as low as 0.1 nM; 0.1 ng/mL, 50 fg, or 2 .times. 10 ³ organisms in a rapid assay that lasts only a few minutes.				
ST	optically active surface app biochem analysis; interference film optical app biochem analysis; thin film analyzer body fluid; bacteria detection body fluid app; virus detection body fluid app; antigen detection body fluid app; antibody detection body fluid app				
IT	Bacteria Blood analysis Body fluid Cerebrospinal fluid Chlamydia Ellipsometers Escherichia coli Feces Films Immunoassay Infrared radiation Interference Latex Light Neisseria meningitidis Optical detectors Pericardium Peritoneum Pharynx Pleura Reflectometers				

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- Respiratory tract
Saliva
Sputum
Stomach
Streptococcus pneumoniae
Ultraviolet radiation
- Urine analysis**
(app. and methods for anal. using thin-film phenomena)
- IT Enzymes
RL: ANT (Analyte); ANST (Analytical study)
(app. and methods for anal. using thin-film phenomena)
- IT Antibodies
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study);
USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Allergens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Antigens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Autoimmune disease
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Lipopolysaccharides
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Microorganism
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT **Neoplasms**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Rheumatoid factors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Virus
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Siloxanes and Silicones, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
- IT Collagens, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(app. and methods for anal. using thin-film phenomena)
- IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(peroxidase conjugates; app. and methods for anal. using thin-film
phenomena)
- IT Vagina
(secretions; app. and methods for anal. using thin-film phenomena)
- IT **Antigens**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL

- (Biological study); USES (Uses)
 (CEA (carcinoembryonic antigen), app. and methods for anal. using thin-film phenomena)
- IT Immunoglobulins
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (E, app. and methods for anal. using thin-film phenomena)
- IT Proteins, specific or class
 RL: ANT (Analyte); ANST (Analytical study)
 (OMP (outer membrane protein), app. and methods for anal. using thin-film phenomena)
- IT Intestine
 (colon, app. and methods for anal. using thin-film phenomena)
- IT Glycoproteins, specific or class
 RL: ANT (Analyte); ANST (Analytical study)
 (gp41, fusion products, app. and methods for anal. using thin-film phenomena)
- IT Streptococcus
 (group A, app. and methods for anal. using thin-film phenomena)
- IT Streptococcus
 (group B, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (hepatitis A, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (hepatitis B, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (hepatitis C, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (hepatitis D, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (hepatitis E, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (human immunodeficiency 1, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (human immunodeficiency 2, app. and methods for anal. using thin-film phenomena)
- IT Proteins, specific or class
 RL: ANT (Analyte); ANST (Analytical study)
 (p24, fusion products, app. and methods for anal. using thin-film phenomena)
- IT Virus, animal
 RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (respiratory syncytial, app. and methods for anal. using thin-film phenomena)
- IT Glass, oxide
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(sodium borosilicate, app. and methods for anal. using thin-film phenomena)

IT Haemophilus influenzae
(type b, app. and methods for anal. using thin-film phenomena)

IT 25550-58-7, Dinitrophenol
RL: ANT (Analyte); ANST (Analytical study)
(app. and methods for anal. using thin-film phenomena)

IT 9001-12-1, Collagenase 9003-99-0, Peroxidase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT 75-78-5 919-30-2, 3-Aminopropyltriethoxysilane 1760-24-3 6843-66-9
7429-90-5, Aluminum, analysis 7440-21-3, Silicon, analysis 7440-47-3,
Chromium, analysis 9002-98-6, Polyethylenimine 9003-17-2D,
Polybutadiene, triethoxysilyl-modified 9003-53-6, Polystyrene
11105-01-4, Silicon oxynitride 12033-89-5, Silicon nitride, analysis
13463-67-7, Titanium dioxide, analysis 31001-77-1 144856-48-4, TC7A
163442-68-0, Starburst 5th Generation 176499-37-9 180208-74-6
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

L109 ANSWER 13 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:447366 HCAPLUS
DN 122:210885
TI Analysis of prostatic fluid: Evidence for the presence of a prospective
marker for prostatic **cancer**
AU Grover, Phulwinder K.; Resnick, Martin I.
CS School Medicine, Case Western Reserve University, Cleveland, OH, USA
SO Prostate (New York, NY, United States) (1995), 26(1), 12-18
CODEN: PRSTDS; ISSN: 0270-4137
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB In an endeavor to identify marker(s) for prostatic **cancer**,
proteins in prostatic fluids were analyzed by two-dimensional (2-D) gel
electrophoresis. The fluids were obtained from five males who had no
prostate lesions and five patients each with benign prostatic hyperplasia
(BPH) and prostatic **carcinoma** (PCA). The specimens were
collected directly over a mixt. of **protease** inhibitors and
centrifuged, and the supernatants were lyophilized and solubilized in
sodium dodecyl sulfate mix. Identical amts. of proteins were pooled
according to donors' prostate disease and the resulting samples were
subjected to 2-D gel anal. employing the ISO-DALT system. The
electrophoretograms were developed by silver or double stain. The samples
of each group exhibited distinctive profiles with the exception of similar
relative positions of major protein spots. A predominant protein
occurring as several charge variants was consistently present in prostatic
fluids of patients with PCA. This protein appeared to be a previously
unknown constituent that we have called protein D (mol. wt. .apprx.22 kDa
and isoelec. point .apprx.4), and was undetectable in the fluids of
"normal" men and patients with BPH. An anal. of pooled, unprocessed
urine from PCA patients revealed that perhaps this protein is
excreted in **urine** in very low quantities. These results
strongly suggest that the potential of this protein as a marker for
prostatic **cancer** should be further explored.
ST prostate **carcinoma** protein marker
IT Proteins, specific or class
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); OCCU
(Occurrence); USES (Uses)
(22,000-mol.-wt., protein D isolation and occurrence in human prostatic
fluid as marker for prostate **carcinoma**)
IT Proteins, specific or class

- RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(D, protein D isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)
- IT **Prostate gland**
(**disease, benign hyperplasia, protein D** isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)
- IT **Prostate gland**
(**neoplasm, carcinoma, protein D** isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)
- L109 ANSWER 14 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:440495 HCAPLUS
DN 122:259298
TI Electrophoretic analysis of a gastric **cancer-associated acid proteinase** using a highly sensitive detection system
AU Aoki, Takashi; Takasaki, Tomoko; Morikawa, Junji; Yano, Takashi; Watabe, Hiroyuki
CS Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido, Hokkaido, 061-02, Japan
SO Biological & Pharmaceutical Bulletin (1994), 17(10), 1358-63
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
CC 7-1 (Enzymes)
AB Section cross-reference(s): 14
A highly sensitive detection system for acid **proteinase** sepd. on polyacrylamide gel was established. This system consisted of two-dimensional electrophoresis, combined with isoelec. focusing and polyacrylamide gel electrophoresis, and casein clotting (caseogram). Human **urine**, serum and gastric tissues obtained from normal individuals and gastric **cancer** patients were analyzed using this system. The previous electrophoretic method was not sufficiently sensitive to detect small amts. of pepsinogen (PG) C in normal **urine**. However, the new rapid and sensitive method clearly revealed its presence. In gastric tissue contg. **cancer** cells, an addnl. **proteinase**, which was not present in normal tissue, was detected and named medium-moving **proteinase** (MMP). **MMP** resembled PGs in alk. stability rather than the non-PG **proteinase**, slow-moving **proteinase** (SMP).
ST gastric **cancer** assocd acid **proteinase** detn
IT Blood analysis
Neoplasm
Stomach, **neoplasm**
Urine analysis
(electrophoretic anal. of a gastric **cancer-assocd. acid proteinase** using a highly sensitive detection system)
IT 61536-72-9, Pepsinogen C
RL: ANT (Analyte); ANST (Analytical study)
(electrophoretic anal. of a gastric **cancer-assocd. acid proteinase** using a highly sensitive detection system)
IT 9001-92-7, **Proteinase**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(gastric **cancer-assocd. medium-moving; electrophoretic anal. of a gastric cancer-assocd. acid proteinase** using a highly sensitive detection system)

L109 ANSWER 15 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1995:438213 HCAPLUS
 DN 122:178377
 TI Inhibition of **tumors** by suppressing activity of inhibitors of
proteases or nonproteolytic matrix-degrading enzymes
 IN Brunner, Nils; Roemer, John; Ellis, Vincent; Pyke, Charles;
 Groendahl-Hansen, Jan; Pedersen, Helle; Hansen, Heine Høei; Danøe, Keld
 PA Cancerforskningsfondet af 1989, Den.
 SO PCT Int. Appl., 93 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K038-00
 ICS A61K038-49; A61K039-395; G01N033-574; G01N033-573
 CC 1-6 (Pharmacology)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9502413	A1	19950126	WO 1994-DK288	19940718	<--
	W:			AM, AU, BB, BG, BR, BY, CA, CN, CZ, DE, DK, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, US, UZ, VN		
	RW:			KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	AU 9471833	A1	19950213	AU 1994-71833	19940718	<--
	EP 712312	A1	19960522	EP 1994-920904	19940718	<--
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE		
	JP 10500097	T2	19980106	JP 1994-504300	19940718	<--
	US 6224865	B1	20010501	US 1996-583129	19960515	<--
	US 2001034327	A1	20011025	US 2001-836323	20010418	<--
	US 2003096755	A1	20030522	US 2003-336513	20030102	<--
PRAI	DK 1993-851	A	19930716			<--
	WO 1994-DK288	W	19940718			<--
	US 1996-583129	A3	19960515			<--
	US 2001-836323	B1	20010418			

AB Methods are disclosed for inhibiting **malignant tumor** growth, invasion, and/or **metastasis** in a patient, the methods comprising suppressing the inhibitory activity of an inhibitor of a **protease** or of a nonproteolytic matrix-degrading enzyme (IPNME) in **malignant tumor** tissue or potential **malignant tumor** tissue. The suppression may be brought about administering compds. interacting with the IPNME, but also administration of compds. interacting with transcription of genes encoding the IPNME is a possibility. Also disclosed are methods of selecting and identifying compds. in the therapeutic methods, as well as the use of such compds. in the treatment of **malignancies**. The prognostic value of PAI-1 (plasminogen activator inhibitor type 1) in bronchogenic **adenocarcinoma** is described, as is use of neutralizing monoclonal anti-PAI-1 antibodies to inhibit formation of **metastasis** of a human breast **cancer** xenograft in nude mice.

ST **protease** inhibitor suppression **tumor** treatment;
antitumor matrix degrading enzyme inhibitor suppression

IT Cytotoxic agents
 (conjugates with PAI-1-binding compds.; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Blood vessel
 (formation; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Lung, neoplasm**
 (in situ hybridization for PAI-1 mRNA and immunostaining of PAI-1 protein in human lung **cancer**)

IT Ribonucleic acids, messenger

- RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(in situ hybridization for PAI-1 mRNA and immunostaining of PAI-1 protein in human lung **cancer**)
- IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**proteinase**; screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Blood analysis
Urine analysis
(screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm**
(tissue; screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(to PAI-1; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Gene, animal
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(transformed stromal cells in **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Extracellular matrix
Fibroblast
Leukocyte
Macrophage
Neoplasm inhibitors
(**tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm inhibitors**
(bladder **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm inhibitors**
(brain, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm inhibitors**
(**carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Ovary, neoplasm**
(**carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Uterus, neoplasm**
(cervix, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm inhibitors**
(colon **adenocarcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Intestine, **neoplasm**
(colon, **adenocarcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm inhibitors**
(digestive tract, **tumor** inhibition by suppression of

- inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Blood vessel
(endothelium, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Enzymes
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(extracellular matrix-degrading, nonproteolytic; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(female reproductive tract **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Reproductive tract**
(female, **neoplasm**, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(genitourinary tract, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(hematol., **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Brain, neoplasm**
Skin, neoplasm
Stomach, neoplasm
(inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(lung non-small-cell **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(lymphoma, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(mammary gland, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(**melanoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Neoplasm** inhibitors
(**metastasis**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT Antibodies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, neutralizing, to PAI-1; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Bladder**
Prostate gland
(**neoplasm**, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
- IT **Digestive tract**
Genitourinary tract

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- Mammary gland**
(neoplasm, inhibitors, ppression of inhibitor of
protease or nonproteolytic matrix-degrading enzymeex
Genitourinary tract,)
- IT Bronchi
(neoplasms, adenocarcinoma, PAI-1 prognostic value
in bronchogenic adenocarcinoma)
- IT Lung, neoplasm
(non-small-cell carcinoma,
inhibitors, tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT Neoplasm inhibitors
(ovary carcinoma, tumor inhibition by suppression
of inhibitor of protease or nonproteolytic matrix-degrading
enzyme)
- IT Neoplasm inhibitors
(prostate gland carcinoma, tumor inhibition by
suppression of inhibitor of protease or nonproteolytic
matrix-degrading enzyme)
- IT Neoplasm inhibitors
(sarcoma, tumor inhibition by suppression of
inhibitor of protease or nonproteolytic matrix-degrading
enzyme)
- IT Neoplasm inhibitors
(skin, tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT Neoplasm inhibitors
(skin squamous-cell carcinoma, tumor inhibition by
suppression of inhibitor of protease or nonproteolytic
matrix-degrading enzyme)
- IT Skin, neoplasm
(squamous-cell carcinoma, inhibitors,
tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT Neoplasm inhibitors
(stomach, tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT Organ
(stroma, transformed stromal cells in tumor inhibition by
suppression of inhibitor of protease or nonproteolytic
matrix-degrading enzyme)
- IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(urokinase-type plasminogen activator, screening assay in relation to
tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT Neoplasm inhibitors
(uterus cervix carcinoma, tumor inhibition by
suppression of inhibitor of protease or nonproteolytic
matrix-degrading enzyme)
- IT Animal growth regulators
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(vitronectins, inhibition of PAI-1 binding to vitronectin in relation
to tumor inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)
- IT 9001-92-7, Proteinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(receptors; screening assay in relation to tumor inhibition
by suppression of inhibitor of protease or nonproteolytic
matrix-degrading enzyme)
- IT 9001-90-5, Plasmin 9001-91-6, Plasminogen 9025-26-7, Cathepsin D
9039-53-6, Urokinase-type plasminogen activator 37205-61-1,

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Proteinase inhibitor 37259-58-8, Serine protease 37353-41-6, Cysteine protease 78169-47-8, Aspartic protease 81669-70-7, Metalloprotease 89800-66-8, Heparanase 124861-55-8, TIMP-2 140208-23-7, PAI-1 140208-24-8 142243-03-6, PAI-2 148196-69-4, Protease nexin-1

IT RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (tumor inhibition by suppression of inhibitor of protease or nonproteolytic matrix-degrading enzyme)
 9039-53-6D, Urokinase-type plasminogen activator, derivs. and variants
 82657-92-9D, Pro-urokinase-type plasminogen activator, derivs. and variants
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (tumor inhibition by suppression of inhibitor of protease or nonproteolytic matrix-degrading enzyme)

L109 ANSWER 16 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:412954 HCAPLUS

DN 122:155762

TI Method of sample preparation for urine protein analysis with capillary electrophoresis

IN Liu, Cheng-Ming; Wang, Hann-Ping

PA Beckman Instruments, Inc., USA

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-483

ICS G01N033-493; G01N030-14; G01N027-447

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 13, 14

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9502182	A1	19950119	WO 1994-US5631	19940518 <--
W: CA, JP				
EP 659274	A1	19950628	EP 1994-921199	19940518 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2143206	AA	19960119	CA 1994-2143206	19940518 <--
JP 08501638	T2	19960220	JP 1994-504023	19940518 <--
PRAI US 1993-91844		19930709 <--		
WO 1994-US5631		19940518 <--		

AB Processes are provided for pretreating body fluid (e.g., urine) compns. and subsequently analyzing the pretreated body fluid compns. for analytes of interest esp. in clin. disease diagnosis. Processes for pretreating the compns. include providing a size exclusion gel having a mol. wt. fractionation range or a mol. wt. exclusion such that the size exclusion gel is capable of excluding or fractionating the analytes of interest and then causing the compn. to contact the size exclusion gel to sep. the analytes from low-mol.-wt. compn. components which interfere with the sepn. and anal. of the analytes of interest. Processes for analyzing pretreated compns. include electrophoretic methods such as capillary zone electrophoresis which involve the sepn. and detection of analytes of interest. Examples are given of the detn. of proteins in the urine of patients with myeloma and kidney disease.

ST urine protein detn gel chromatog electrophoresis; disease diagnosis protein detn urine pretreatment

IT Chromatography, gel

Diagnosis
 Disease
 Kidney, disease

Myeloma**Urine analysis**

- (proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Albumins, analysis
Haptoglobins
Immunoglobulins
Proteins, analysis
Transferrins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Polysaccharides, biological studies
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Immunoglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Bence-Jones, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Proteins, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (metabolic disorders, proteinuria, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Electrophoresis and Ionophoresis
(zone, capillary, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Macroglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.alpha.2-, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT Globulins, analysis
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.gamma.-, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT 9035-81-8, Trypsin inhibitor 9041-92-3, .alpha.1-Antitrypsin
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)
- IT 9003-05-8, Polyacrylamide 9004-54-0, Dextran, biological studies
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

L109 ANSWER 17 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1994:573952 HCAPLUS

DN 121:173952

TI Maspin, a novel serpin with tumor suppressing activity and the gene encoding it

IN Sager, Ruth

PA Dana-Farber Cancer Institute, Inc., USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12Q001-00

ICS G01N033-48; G01N033-50; C12N005-00; C12N015-00; A61K039-00;
A61K037-00; C07H021-04

CC 7-3 (Enzymes)

Section cross-reference(s): 1, 9

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9405804	A1	19940317	WO 1993-US8322	19930901 <--
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 662150	A1	19950712	EP 1993-921337	19930901 <--
	EP 662150	B1	20021218		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08500977	T2	19960206	JP 1993-507469	19930901 <--
	AT 229983	E	20030115	AT 1993-921337	19930901 <--
PRAI	US 1992-938823	A	19920901	<--	
	WO 1993-US8322	W	19930901	<--	
AB	A novel serpin called maspin that is present in normal mammary epithelial tissues and absent from primary carcinomas is identified and a cDNA encoding it is cloned. The gene is therefore considered a tumor suppressor gene. The cDNA and antibodies to the enzyme are useful diagnostic and therapeutic agents.				
ST	maspin serpin cDNA tumor suppressor gene				
IT	Gene, animal				
	RL: BIOL (Biological study)				
	(cDNA, for serine proteinase inhibitor maspin, cloning of)				
IT	Saliva				
	Semen				
	Tear				
	(detn. of maspin in, in diagnosis of cancer)				
IT	Nucleic acid hybridization				
	(for diagnosis of breast cancer , detection of maspin gene or mRNA in)				
IT	Blood analysis				
	Urine analysis				
	(for levels of maspin, in diagnosis of cancer)				
IT	Immunoassay				
	(for marpin in mammary gland epithelium, in diagnosis of cancer)				
IT	Epithelium				
	(maspin gene and transcript in, detection of, in diagnosis of cancer)				
IT	Genetic mapping				
	(of human maspin gene to chromosome 18q21.3)				
IT	Protein sequences				
	(of maspin of human)				
IT	Neoplasm inhibitors				
	(screening of, detn. of effects on maspin levels in tumor cells for)				
IT	Antibodies				
	RL: BIOL (Biological study)				
	(to maspin, cancer diagnosis and treatment in relation to)				
IT	Gene, animal				
	RL: BIOL (Biological study)				
	(anti-onco-, gene for serine proteinase inhibitor maspin as, in mammary epithelium)				
IT	Deoxyribonucleic acid sequences				
	(complementary, for maspin of human)				
IT	Mammary gland				
	(epithelium, maspin gene and transcript in, detection of, in diagnosis of cancer)				
IT	Therapeutics				
	(geno-, for tumors , increasing level of maspin gene)				

- expression in)
- IT Milk
(human, detn. of maspin in, in diagnosis of **cancer**)
- IT Chromosome
(human 18, maspin gene mapping to 18q21.3 of)
- IT **Mammary gland**
(**neoplasm**, diagnosis and treatment of, maspin gene in)
- IT 153572-12-4, Maspin (human clone Z32-1 reduced)
RL: BIOL (Biological study)
(amino acid sequence of and cloning of cDNA for)
- IT **157857-21-1**, Serine **proteinase** inhibitor maspin
RL: BIOL (Biological study)
(cDNA for, cloning of, **tumor** suppression properties of)
- IT 156621-27-1
RL: BIOL (Biological study)
(nucleotide sequence and cloning of of cDNA for)
- L109 ANSWER 18 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:25968** HCAPLUS
DN **120:25968**
TI Pepsinogens in health and disease
AU Plebani, M.
CS Dep. Lab. Med., Univ. Hosp., Padua, Italy
SO Critical Reviews in Clinical Laboratory Sciences (1993), 30(3),
273-328
CODEN: CRCLBH; ISSN: 1040-8363
- DT Journal; General Review
LA English
CC 7-0 (Enzymes)
Section cross-reference(s): 14
- AB A review with 291 refs. focused on pepsinogens. The recommended classification and nomenclature of the aspartic **proteinases** is described and their genetics, biochem. and physiol. is discussed. A detailed review of the methods for the measurement of pepsinogens in serum, **urine**, and gastric mucosa is provided. Data on pepsinogen levels in healthy subjects are discussed with respect to sex, age, smoking habit, and the presence of circadian rhythm. The value of pepsinogen measurement in peptic ulcer to det. ulcer outcome and recurrence, in gastric **cancer**, and in Helicobacter pylori infection is reviewed. Finally, the effects of drugs on peptic secretion are discussed. In light of these data, the measurement aspartic **proteinases**, and in particular that of pepsinogen A and C, may be regarded as an effective biochem. approach to the evaluation and monitoring of patients with upper gastrointestinal diseases.
- ST review pepsinogen aspartic **proteinase** gastrointestinal disease
IT Digestive tract
(upper, disease, pepsinogen A and C and other aspartic **proteinases** in evaluation and monitoring of)
- IT 9001-10-9, Pepsinogen
RL: BIOL (Biological study)
(multiple forms, detn. and properties of, upper gastrointestinal diseases evaluation and monitoring in relation to)
- IT **78169-47-8**, Aspartic **proteinase**
RL: BIOL (Biological study)
(nomenclature and biochem. and physiol. of, upper gastrointestinal diseases in relation to)
- L109 ANSWER 19 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:662079** HCAPLUS
DN **119:262079**
TI Decrease in vivo of cysteine endopeptidases in blood of patients with **tumor** of the larynx
AU Mikulewicz, Wojciech; Berdowska, Izabela; Jarmulowicz, Jerzy; Siewinski,

- Maciej
 CS ENT Dep., Reg. Hosp., Wroclaw, 51-124, Pol.
 SO Anti-Cancer Drugs (1993), 4(3), 341-4
 CODEN: ANTDEV; ISSN: 0959-4973
 DT Journal
 LA English
 CC 1-6 (Pharmacology)
 AB Since cysteine endopeptidase (cathepsins B and L) have been proposed to be implicated in **tumor malignancy**, the authors have attempted to decrease these in vivo. Large amts. of **urine** cysteine peptidase inhibitors (UCPI) are present in the **urine** of patients. The authors' results indicate protective effects of a UCPI prepn. against human serum cysteine endopeptidases.
- ST cysteine endopeptidase inhibitor **urine larynx cancer**
 IT Blood serum
 (cystine endopeptidase of, of human with larynx **cancer**,
urine cystine peptidase inhibitors effect on)
 IT **Neoplasm** inhibitors
 (larynx, **urine** cystine peptidase inhibitors as, in human)
 IT Larynx
 (**neoplasm**, cystine endopeptidases of blood serum in, in
 human, **urine** cystine peptidase inhibitors effect on)
 IT 9031-96-3, Peptidase
 RL: BIOL (Biological study)
 (inhibitory cystine-targeted of **urine**, of human with larynx
cancer, blood serum cystine endopeptidases response to)
 IT 9047-22-7, Cathepsin B 60616-82-2, Cathepsin L
 RL: BIOL (Biological study)
 (of blood serum, of human with larynx **cancer**, urinary cystine
 peptidase inhibitors effect on)
- L109 ANSWER 20 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1993:492498 HCAPLUS
 DN 119:92498
 TI A study on cathepsin B-like substance in patients with urological
cancer
 AU Ueda, Mitsutaka
 CS Sch. Med., Hiroshima Univ., Hiroshima, Japan
 SO Nippon Hinyokika Gakkai Zasshi (1993), 84(2), 355-63
 CODEN: NGKZA6; ISSN: 0021-5287
 DT Journal
 LA Japanese
 CC 14-1 (Mammalian Pathological Biochemistry)
 AB Cathepsin B is a lysosomal cysteine **proteinase** which is thought to regulate intracellular protein metab. In the present study, cathepsin B-like activity was detd. in the **urine** of 53 patients with renal cell **carcinoma**, 22 patients with urothelial **carcinoma** and 41 control subjects. In addn., immunohistochem. study of cathepsin B was performed in specimens obtained from 20 patients with renal cell **carcinoma**, 59 patients with bladder **carcinoma** and 20 patients with renal pelvic and ureter **carcinoma** by using sheep anti-human liver cathepsin B antibody. Cathepsin B-like activity was higher in the **urine** from patients with renal cell **carcinoma** or urothelial **carcinoma** than in that from controls. Pos. reactions for cathepsin B were found in 18 of 20 patients with renal cell **carcinoma**, in 37 of the 59 patients with bladder **carcinoma** and in 14 of the 20 patients with renal pelvic and ureter **carcinoma**. In patients with urothelial **carcinoma** high rates of pos. reaction for cathepsin B were obsd. in patients with advanced stage **tumors**, with INF.gamma.-type **tumors** and with **metastatic** lesions. In patients with renal cell **carcinoma**, there was no correlation between the rate of pos. reaction and pathol. findings. These results indicate that urinary

- cathepsin B-like activity is higher in patients with urol. **cancer** and that a highly pos. reaction for cathepsin B is a risk factor for **tumor** invasion, **metastasis** and poor prognosis in patients with urothelial **carcinoma**.
- ST cathepsin B diagnosis urothelial **cancer**
- IT **Bladder**
(epithelium, **neoplasm**, cathepsin B-like substance as marker for, diagnosis and prognosis predictor)
- IT 9047-22-7, Cathepsin B
RL: BIOL (Biological study)
(as diagnostic marker and prognosis predictor, in humans with urothelial **carcinoma**)
- L109 ANSWER 21 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1993:121929 HCAPLUS
DN 118:121929
TI Evaluation of metabolism of connective tissue proteins in patients with lung **cancer**
AU Mykala-Ciesla, Joanna; Gminski, Jan; Machalski, Marek; Drozd, Marian
CS 1st Clin. Intern. Med., Silesian Med. Acad., Katowice, 40-029, Pol.
SO Acta Biochimica Polonica (1992), 39(1), 33-8
CODEN: ABPLAF; ISSN: 0001-527X
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB The metab. of collagen and elastin was evaluated in humans with benign and **malignant** lung **neoplasms**. The levels of hydroxyproline and hydroxylysine in blood plasma and **urine** were measured. Elastase activity and elastin degrdn. peptides were detd. in blood plasma. There were some relations found between the biochem. indexes and **neoplasm malignity**.
- ST lung **cancer** collagen elastin blood **urine**
- IT **Lung, neoplasm**
(collagen and elastin metab. in humans with)
- IT Blood plasma
(elastase and hydroxylysine and hydroxyproline of, collagen and elastin metab. in humans with lung **cancer** in relation to)
- IT **Urine**
(hydroxylysine and hydroxyproline of, collagen and elastin metab. in humans with lung **cancer** in relation to)
- IT Collagens, biological studies
Elastins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metab. of, in lung **cancer** in humans)
- IT 51-35-4, Hydroxyproline 1190-94-9, Hydroxylysine
RL: BIOL (Biological study)
(of blood plasma and **urine**, collagen and elastin metab. in humans with lung **cancer** in relation to)
- IT 9004-06-2, Elastase
RL: BIOL (Biological study)
(of blood plasma, in lung **cancer** in humans)
- L109 ANSWER 22 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1992:444079 HCAPLUS
DN 117:44079
TI Reagents for liver disease diagnosis by immunoassay of kininogen-calpain complex in body fluids
IN Ookubo, Iwao; Sasaki, Minoru
PA Green Cross Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent

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LA Japanese
 IC ICM G01N033-53
 ICS G01N033-573
 CC 9-10 (Biochemical Methods)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04110660	A2	19920413	JP 1990-230169	19900830 <--
JP 1990-230169		19900830 <--		

PI JP 04110660
 PRAI JP 1990-230169
 AB The title reagents contain an antibody to kininogen-calpain complex. Thus, kininogen-calpain complex in blood was incubated with a 1st antibody-sensitized microplate at 10-37.degree. for 0.1-5 h, incubated with peroxidase-labeled 2nd antibody, and the bound enzyme activity was spectrometrically measured for the complex detn. The method was used in the diagnosis of chronic hepatitis, cirrhosis, and liver **cancer**. The serum complex levels were 60.4, 201.7, and 121 .mu.g/mL, resp., vs 31.3 mg/mL for normal subjects.

ST serum kininogen calpain complex EIA; liver disease serum kininogen calpain complex

IT Kininogens
 RL: ANST (Analytical study)
 (calpain complexes, detn. of, in body fluids, by EIA, for liver disease diagnosis)

IT Cirrhosis
 Liver, disease
 (diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT Blood analysis
 Body fluid
Urine analysis
 (kininogen-calpain complex detn. in, by EIA, for liver disease diagnosis)

IT **Diagnosis**
 (of liver diseases, kininogen-calpain complex detn. in body fluids by EIA for)

IT Antibodies
 RL: ANST (Analytical study)
 (to kininogen-calpain complex, for EIA for liver disease)

IT Hepatitis
 (chronic, diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT **Liver, neoplasm**
 (hepatoma, diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT Antibodies
 RL: ANST (Analytical study)
 (monoclonal, to kininogen-calpain complex, for EIA for liver disease)

IT **78990-62-2D, Calpain, kininogen complexes**
 RL: ANT (Analyte); ANST (Analytical study)
 (detn. of, in body fluids, by EIA, for liver disease diagnosis)

L109 ANSWER 23 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1991:550406 HCAPLUS
 DN 115:150406

TI **Tumor necrosis factor inhibitor from urine** for treating **tumor** necrosis factor-related diseases
 IN Suzuki, Jun; Yone, Kenji; Ichikawa, Yataro
 PA Teijin Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07K015-16

ICA A61K037-02; G01N033-50; G01N033-53
 CC 1-12 (Pharmacology)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03127800	A2	19910530	JP 1989-264887	19891013 <--
PRAI	JP 1989-264887		19891013 <--		

AB **Tumor** necrosis factor (TNF) inhibitor is isolated from **urine** of **membranoproliferative** glomerulonephritis patients and characterized. The substance inhibited the killing effect of TNF on L 929 cells, has a mol. wt. of 30,000 (gel filtration), pI of 5.7, and thermostability at 56.degree. for 60 min, and is labile to **protease**. The TNF inhibitor prepd. can be used in treating or diagnosing TNF-related diseases (no data). Thus, 1 L **urine** from the patients was subjected to ultrafiltration for concn. and chromatographed on DEAE-Sepharose CL-6B column and Protein C4 reversed-phase column to give a fraction contg. TNF inhibitor.

ST **urine tumor** necrosis favor inhibitor; therapeutic

IT **tumor** necrosis factor inhibitor

IT **Urine**
 (tumor necrosis factor inhibitor extn. from, of **membranoproliferative** glomerulonephritis, for therapeutic use)

IT **Kidney, disease or disorder**
 (**membranoproliferative** glomerulonephritis, **tumor** necrosis factor inhibitor extn. from **urine** of, for therapeutic use)

IT Lymphokines and Cytokines
 RL: BIOL (Biological study)
 (tumor necrosis factor, inhibitor for, extn. of, from **urine** of **membranoproliferative** glomerulonephritis, for therapeutic use)

L109 ANSWER 24 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1991:406034 HCAPLUS

DN 115:6034

TI **Tumor**-associated trypsin inhibitor and **tumor**-associated trypsin

AU Stenman, Ulf Hakan

CS Clin. Hormone Lab., Helsinki Univ., Helsinki, SF-00290, Finland

SO Scandinavian Journal of Clinical and Laboratory Investigation, Supplement (1990), 50(201), 93-101

CODEN: SCLSAH; ISSN: 0085-591X

DT Journal

LA English

CC 14-1 (Mammalian Pathological Biochemistry)

AB **Tumor**-assocd. trypsin inhibitor (TATI) is a 6-kDa peptide, which is synthesized at low concns. by several **tumors** and cell lines. Very high concns. of TATI occur in mucinous ovarian **tumors**. Elevated levels of TATI occur in serum and **urine** in connection with most types of **cancer** at advanced stages. In mucinous ovarian **cancer** up to 85 % of all cases have elevated serum levels. Because high levels also occur in early mucinous ovarian **cancer** TATI appears to be the marker of choice for this **tumor**. Elevated levels may also occur in **nonmalignant** disease, esp. in patients with severe infections, tissue destruction and pancreatitis. Prodn. of TATI in **tumors** is assocd. with expression of two new **tumor**-assocd. trypsin(ogen) (TAT) isoenzymes, TAT-1 and -2, TAT-2 being the major form. These enzymes are immunol. similar to trypsinogen-1 and -2, resp. They activate prourokinase and may therefore trigger the **tumor**-assocd. **protease** cascade contributing to the invasiveness of **malignant tumors**.

ST **tumor** assocd trypsin inhibitor **neoplasm**

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- IT **Neoplasm, metabolism**
(**tumor-assocd.** trypsin inhibitor and **tumor-assocd.**
trypsin isoenzymes formation by human)
- IT .9002-07-7, Trypsin
RL: BIOL (Biological study)
(isoenzymes and inhibitor, **tumor-assocd.**, formation of, by
various **neoplasms** of humans)
- L109 ANSWER 25 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1988:524780 HCAPLUS
DN 109:124780
TI Characterization of a **tumor-associated serine protease**
AU Stenman, Ulf Hakan; Koivunen, Erkki; Vuento, Matti
CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290, Finland
SO Biological Chemistry Hoppe-Seyler (1988), 369(Suppl.), 9-14
CODEN: BCHSEI; ISSN: 0177-3593
- DT Journal
LA English
CC 7-2 (Enzymes)
- AB Section cross-reference(s): 14
Previously, a **tumor-assocd.** trypsin inhibitor (TATI) was shown
to be elevated in level in **urine** and serum of patients with
gynecol. **cancer**. A **tumor-assocd. protease**
reacting with TATI, called **protease T**, was found in cyst fluid
from mucinous ovarian **tumors**. The **protease** occurs in
complex with TATI. Its **protease** activity can be measured only
after disocn. of the complex, by reversed phase chromatog. at low pH and
elution with an iso-Pr alc. gradient. **Protease T** is a serine
protease. Its optimum activity at pH 9.1 and mol. mass of 24
kilodaltons in gel chromatog. are similar to those of trypsin but the
substrate specificity is not identical and its pI is .apprx.4.0, which is
lower than the corresponding values of both cationic (pI 9) and anionic
trypsin (pI 5). **Protease T** could be assocd. with the elevation
of TATI seen in certain **tumor** patients.
- ST **protease** serum T **tumor** ovary; trypsin inhibitor
tumor assocd serine **protease**
- IT **Neoplasm, composition**
(**protease T** assocd. with, of human ovary, purifn. and
properties of)
- IT Pancreas, composition
(trypsin of, purifn. of and comparison with **tumor-assocd.**
serine **protease** of human ovary)
- IT **Ovary, neoplasm**
(cystic, **protease T** of, purifn. and properties of)
- IT 37259-58-8P
RL: PREP (Preparation)
(of **tumor** of ovary of human, purifn. and properties of)
- IT 9035-81-8
RL: BIOL (Biological study)
(**tumor-assocd.**, of human, **protease T** of ovary
assocn. with)
- L109 ANSWER 26 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1986:66412 HCAPLUS
DN 104:66412
TI Pancreatic secretory trypsin inhibitor-like immunoreactivity in
pancreatectomized patients
AU Halila, Hannu; Huhtala, Marja Liisa; Schroder, Tom; Kiviluoto, Tuula;
Stenman, Ulf Hakan
CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290, Finland
SO Clinica Chimica Acta (1985), 153(3), 209-16
CODEN: CCATAR; ISSN: 0009-8981
- DT Journal

- LA English
 CC 13-1 (Mammalian Biochemistry)
 Section cross-reference(s): 14
- AB Pancreatic secretory trypsin inhibitor (PSTI) is a 6000-dalton peptide that occurs in high concns. in the pancreas and in pancreatic juice. It is thought to be synthesized by pancreatic acinar cells. An identical trypsin inhibitor was previously found (Stenman, U. H., et al., 1982) at high concns. in the **urine** of patients with gynecol. **malignancy**. Therefore, the inhibitor was designated **tumor**-assocd. trypsin inhibitor (TATI). In the present work, patients who had undergone total pancreatoduodenectomy for pancreatic **cancer** or chronic pancreatitis were studied. By RIA, normal levels of this inhibitor were found in the serum and **urine** of pancreatectomized patients. The absence of pancreas was confirmed by measuring serum trypsin. By gel filtration and HPLC it was found that PSTI/TATI occurring in pancreatectomized patients was indistinguishable from that found in connection with pancreatitis and ovarian **cancer**.
- ST pancreatic secretory trypsin inhibitor **urine** serum
 IT **Ovary, neoplasm**
 (pancreatic secretory trypsin inhibitor-like immunoreactivity of blood serum and **urine** of human in)
- IT Blood serum
Urine
 (pancreatic secretory trypsin inhibitor-like immunoreactivity of, of human, nonpancreatic origin of)
- IT Pancreas, disease or disorder
 (pancreatitis, pancreatic secretory trypsin inhibitor-like immunoreactivity of blood serum and **urine** of human in)
- IT **50936-63-5**
 RL: BIOL (Biological study)
 (of blood serum and **urine** of humans, nonpancreatic origin of)
- L109 ANSWER 27 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN **1984:566095** HCAPLUS
 DN **101:166095**
 TI Further purification and characterization of acid-stable **protease** inhibitor from ascites of an ovarian **carcinoma** patient
 AU Akazawa, Kenji; Sumi, Hiroyuki; Maruyama, Masugi; Mihara, Hisashi
 CS Dep. Physiol., Miyazaki Med. Coll., Miyazaki, 889-16, Japan
 SO Clinica Chimica Acta (**1984**), 142(1), 47-60
 CODEN: CCATAR; ISSN: 0009-8981
- DT Journal
 LA English
 CC 7-2 (Enzymes)
 AB An acid-stable **protease** inhibitor (AS-PI), found in ascitic fluid from patients with ovarian **carcinoma**, was purified using DEAE-cellulose and isoelec. focusing (IEF), and a partial characterization was undertaken. On DEAE-cellulose ion-exchange column chromatog., AS-PI activity was obsd. in both adsorbed (the main AS-PI peak) and nonadsorbed fractions. By IEF, the resp. pI values were 1.6 and 4.5. By gel filtration, the mol. wt. of the main peak AS-PI was 78,000. This AS-PI strongly inhibited trypsin and to a lesser extent chymotrypsin, but exerted no inhibitory effect on plasmin. It slightly inhibited SH **proteases** such as papain and ficin. Immunolog., AS-PI was distinct from .alpha.1-antitrypsin, .alpha.1-antichymotrypsin, inter-.alpha.-trypsin inhibitor, antithrombin III, C1-inactivator, .alpha.2-macroglobulin, and .alpha.2-plasmin inhibitor. The main AS-PI reacted with and was neutralized by anti-urinary trypsin inhibitor serum, and, on immunoelectrophoresis, had a mobility slightly cathodal to serum albumin.
- ST acid stable **protease** inhibitor ascites ovary; **carcinoma**
 ovary **protease** inhibitor acid stable
 IT **Carcinoma**

(ascites, acid-stable **protease** inhibitor of, of human ovary)
 IT **Ovary, neoplasm**
 (carcinoma, acid-stable **protease** inhibitor of, of human)
 IT **37205-61-1P**
 RL: PREP (Preparation)
 (acid-stable, of ascites of ovarian **carcinoma** of human, purifn. and specificity and antigenicity of)
 IT 9035-81-8
 RL: BIOL (Biological study)
 (of **urine**, of human, acid-stable **proteinase** inhibitor of ascites of ovarian **carcinoma** of human in relation to)

L109 ANSWER 28 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1984:117175 HCAPLUS

DN 100:117175

TI Quantitation of enolase by enzyme immunoassay and its application on **cancer** diagnosis

PA Amano Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC G01N033-54; C12Q001-00

ICA C12N011-08

CC 7-1 (Enzymes)

Section cross-reference(s): 14

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58198758	A2	19831118	JP 1982-81776	19820515 <--
	JP 03008515	B4	19910206		
PRAI	JP 1982-81776		19820515	<--	

AB Enolase is detd. in human body fluids by an enzyme immunoassay (EIA) which uses a solid phase contg. immobilized antibody to enolase (anti-enolase antibody) and enzyme [esp. .beta.-D-galactosidase (Gal)]-labeled anti-enolase antibody. Optionally, the **protease**-released anti-enolase antibody fragments, e.g., F(ab')₂, may be used instead of the intact antibody. For detn. of enolase activity, an enolase-contg. sample is 1st reacted with the support contg. immobilized antibody, the reactant is then reacted with the Gal-labeled antibody, and the Gal bound to the support is subsequently measured to obtain enolase activity. Thus, an F(ab')₂ fragment was prepd. by pepsin digestion of anti-enolase antibody obtained after immunizing rabbits with enolase from human brain. The F(ab')₂ was reduced with 2-mercaptoethylamine and reacted with an excess amt. of N,N'-o-phenylenedimaleimide to form maleimide-Fab', and finally reacted with Gal to produce the Fab'-Gal complex. In another expt., F(ab')₂ was immobilized on a silicon rubber support. A human enolase-contg. sample (e.g., blood serum) was reacted with the F(ab')₂-contg. support and then with the Fab'-Gal complex, and the Gal bound to the support was detd. by measuring 4-methylumbelliferone formed from 4-methylumbelliferyl-.beta.-D-galactoside as substrate. Application of the EIA for serum enolase in diagnosis of lung and pancreatic **cancer** and for **urine** enolase in diagnosis of **neuroblastoma** is described.

ST enolase immunoassay **cancer** diagnosis; serum enolase detn **cancer**; **urine** enolase detn **cancer**

IT **Lung, neoplasm**

Pancreas, neoplasm

(diagnosis of, enolase detn. in blood serum of human for)

IT Blood analysis

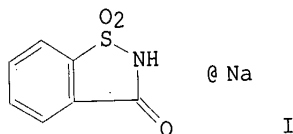
Urine analysis

gitomer - 09 / 469637

- (enolase detn. in, of human, **cancer** diagnosis in relation to)
- IT **Carcinoma**
(of lung and pancreas, enolase detn. in blood serum of human in diagnosis of)
- IT Nerve, **neoplasm**
(**neuroblastoma**, diagnosis of, enolase detn. in **urine** of human for)
- IT 9014-08-8
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, of blood serum and **urine** of human, **cancer** diagnosis in relation to)
- IT 9031-11-2
RL: BIOL (Biological study)
(in enolase immunoassay in blood serum and **urine** of human)
- L109 ANSWER 29 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1983:451204 HCAPLUS
DN 99:51204
TI Acid stable **protease** inhibitor in ascites of ovarian **carcinoma**
AU Akazawa, Kenji; Sumi, Hiroyuki; Maruyama, Masugi; Mihara, Hisashi
CS Dep. Physiol., Miyazaki Med. Coll., Miyazaki, 889-16, Japan
SO Clinica Chimica Acta (1983), 131(1-2), 87-99
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB In patients with ovarian **tumors**, a novel **protease** inhibitor which is very stable in acid (AS-PI, acid stable **protease** inhibitor) was identified in the ascites and **tumor** fluid as well as in the **urine** and plasma. The highest AS-PI activity was obsd. in the **tumor** fluid of ovarian **carcinomas** (10.7 units (U)/mL), followed by the ascites of ovarian **carcinomas** (8.2 U/mL). There was a significant difference in activity of the **tumor** fluid and ascites between **malignant** and benign **tumors** (less AS-PI activity in benign). The same antigenicity of AS-PI fractionated from ascites of ovarian **carcinomas** to urinary trypsin inhibitor was identified by double immunodiffusion and neutralization techniques. It migrated in the serum albumin fraction on immunoelectrophoresis. By gel filtration, the AS-PI in the ascites of ovarian **carcinomas** showed a mol. wt. of 70,000-80,000. Two active components with mol. wts. of 61,300 and 73,300 were detected by SDS-polyacrylamide gel electrophoresis.
ST **antiprotease** ovary **carcinoma** fluid characterization;
ascites fluid **antiprotease** ovary **carcinoma**
- IT **Carcinoma**
(**protease** inhibitor of ascitic and **tumor** fluid in ovarian, in human, characterization of).
- IT **Ovary, neoplasm**
(**protease** inhibitor of ascitic and **tumor** fluid in, in human, characterization of)
- IT Blood plasma
Urine
(**protease** inhibitor of, in ovarian **tumors** in human, characterization of)
- IT Ascitic fluid
(**protease** inhibitor of, of ovarian **carcinoma** in human)
- IT 37205-61-1
RL: BIOL (Biological study)
(acid-stable, of ovarian **carcinoma** ascitic and **tumor** fluid, in human, characterization of)

- L109 ANSWER 30 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1982:595062 HCAPLUS
 DN 97:195062
 TI Purification and characterization of a **tumor-associated** trypsin inhibitor from the **urine** of a patient with ovarian **cancer**
 AU Huhtala, Marja Liisa; Pesonen, Kristina; Kalkkinen, Nisse; Stenman, Ulf Haakan
 CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290/29, Finland
 SO Journal of Biological Chemistry (1982), 257(22), 13713-16
 CODEN: JBCHA3; ISSN: 0021-9258
 DT Journal
 LA English
 CC 7-3 (Enzymes)
 Section cross-reference(s): 14
 AB Immunochem. studies on **urine** from a patient with ovarian **cancer** revealed the presence of a **tumor-assocd.** peptide. This peptide occurred in elevated concns. in the **urine** of some patients with gynecol. **cancer**, in early amniotic fluid, and in some **cancer tumor** exts. from these patients. The peptide was purified from the **urine** of a patient with ovarian **cancer** by gel chromatog., ion-exchange chromatog., and reverse-phase liq. chromatog. The amino acid compn. of the peptide was detd. The 56 amino acids corresponded to a mol. wt. of 6200 for the peptide, a value that was in agreement with the mol. wt. established by gel chromatog. The mol. contained no carbohydrate. It was microheterogeneous in charge, the isoelec. point of the main component being 5.8. The purity of the peptide was confirmed by detn. of the N-terminal amino acid sequence. The 21 residues detd. were identical with the corresponding residues of human pancreatic secretory trypsin inhibitor. The purified peptide also inhibited bovine trypsin effectively.
 ST trypsin inhibitor **urine** ovarian **cancer**
 IT Protein sequences
 Amino acids, biological studies
 RL: BIOL (Biological study)
 (of trypsin inhibitor, of human **urine** during ovarian **cancer**)
 IT **Carcinoma**
 (ovarian, trypsin inhibitor of **urine** in, of human).
 IT **Urine**
 (trypsin inhibitor of, in human ovarian **cancer**)
 IT **Ovary, neoplasm**
 (**carcinoma**, trypsin inhibitor of **urine** in, of human)
 IT 50936-63-5
 RL: BIOL (Biological study)
 (in **urine**, during human ovarian **cancer**)
 IT 9035-81-8P
 RL: PREP (Preparation)
 (of **urine**, during human ovarian **cancer**, purifn. and properties of)
- L109 ANSWER 31 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1982:521797 HCAPLUS
 DN 97:121797
 TI The inhibition of urease and **proteases** by sodium saccharin
 AU Lok, Eric; Iverson, Frank; Clayton, David B.
 CS Toxicol. Res. Div., Bur. Chem. Saf., Ottawa, ON, K1A 0L2, Can.
 SO Cancer Letters (Shannon, Ireland) (1982), 16(2), 163-9
 CODEN: CALEDQ; ISSN: 0304-3835
 DT Journal
 LA English

CC 4-6 (Toxicology)
GI



- AB Na saccharin (I) [128-44-9], at concns. similar to those in the **urine** of rats fed 1-5% I in their diet, markedly inhibited urease [9002-13-5] and **protease** [9001-92-7] in vitro; Na ion did not appear to play a role in enzyme inhibition. These observations suggest that enzyme inhibition of any of a large no. of enzymes may play a role in the **tumorigenesis** of the urinary bladder by I.
- ST bladder **neoplasm** saccharin urease **protease**; enzyme saccharin bladder **neoplasm**
- IT **Neoplasm**
(of urinary bladder, **proteases** and urease inhibition by saccharin in relation to)
- IT **Bladder**
(**neoplasm**, **proteases** and urease inhibition by saccharin in relation to)
- IT 128-44-9
RL: BIOL (Biological study)
(enzymes inhibition by, urinary bladder **neoplasia** in relation to)
- IT 9001-92-7 9002-13-5
RL: PROC (Process)
(saccharin inhibition of, urinary bladder **neoplasia** in relation to)
- L109 ANSWER 32 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1982:505957 HCAPLUS
DN 97:105957
TI Radioimmunoassays of high and low molecular weight urokinase
AU Holmberg, L.; Aastedt, B.
CS Gen. Hosp., Univ. Lund, Malmo, Swed.
SO Proceedings of the Serono Symposia (1982), 48(Urokinase: Basic Clin. Aspects), 33-42
CODEN: PSSYDG; ISSN: 0308-5503
- DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 13, 14
- AB The properties and utility of radioimmunoassays of high- and low-mol.-wt. urokinase (I) were discussed. The interfering binding to I of plasma **proteinase** inhibitors was prevented by diisopropylfluorophosphate (DFP). DFP-inactivated I was labeled with 125I via the lactoperoxidase method. Radioimmunoassay was performed with a double antibody system permitting detection of purified I at .gtoreq.0.05 nM. The assay demonstrated that fetal kidney culture I concn. was highest in the early period after explantation, and decreased with time. No I was detected in fetal **urine** or in amniotic fluid. The thyroid gland and thymus produced large amts. of I-type activators. High-mol.-wt. I was found in tissue cultures of bladder **carcinoma**. I excretion in **urine** seems to be an indicator of the no. of functioning nephrons.
- ST urokinase radioimmunoassay; bladder urokinase radioimmunoassay **carcinoma**; kidney urokinase radioimmunoassay
- IT Thymus gland

- Thyroid gland, composition
(urokinase of)
- IT Embryo
(urokinase of kidney of)
- IT **Urine**
(urokinase of, in health and renal disease)
- IT **Carcinoma**
(urokinase of, of bladder)
- IT Kidney, composition
(urokinase of, radioimmunoassay of)
- IT **Bladder**
(**neoplasm, carcinoma**, urokinase of)
- IT 9039-53-6
RL: PROC (Process)
(radioimmunoassay of)
- L109 ANSWER 33 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1978:577604 HCAPLUS
DN 89:177604
TI **Proteases** from cultured **malignant** cells
AU Danoe, Keld; Oronsky, Arnold; Gjedde, Susanne
CS Inst. Med. Microbiol., Univ. Copenhagen, Copenhagen, Den.
SO Proceedings of the FEBS Meeting (1978), Volume Date 1977,
47(Regul. Proteolytic Enzymes Their Inhibitors), 113-25
CODEN: FEBPBY; ISSN: 0071-4402
- DT Journal
LA English
CC 14-10 (Mammalian Pathological Biochemistry)
AB Embryonal mouse fibroblasts transformed by murine **sarcoma** virus released 5 serine **proteinases** and none of these from untransformed cells. Two other serine enzymes were released from both cell types and another one from only the untransformed cells. Two of the enzymes from the transformed cells were plasminogen activators. A serine enzyme from transformed cells was purified. Human **rhabdomyosarcoma** released 8 serine enzymes and **melanoma** 7. Four of these **rhabdomyosarcoma** enzymes and 2 from the **melanoma** were plasminogen activators. As evaluated by electrophoretic mobility, 2 of the activators from the **rhabdomyosarcoma** were identical with 2 activators from **melanoma**, while the other 2 activators from the **rhabdomyosarcoma** were identical with 2 activators found in a urokinase prepn. from human **urine**. Transformed and untransformed chicken embryo fibroblasts dissolved collagen while in the growth phase. After cell confluency the untransformed cell ceased dissoln. while transformed cells continued. In the culture fluid from transformed cells a collagenolytic activity was found and it was stimulated by trypsin or plasmin. The plasmin activators are serine **proteases**.
- ST **protease cell malignancy**
IT **Neoplasm, composition**
(**proteases** of)
- IT 9001-91-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(activator, from **malignant** cells)
- IT 37259-58-8
RL: BIOL (Biological study)
(of **malignant** cells)
- L109 ANSWER 34 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1978:525055 HCAPLUS
DN 89:125055
TI A study of **proteases** and **protease-inhibitor** complexes in biological fluids
AU Granelli-Piperno, Angela; Reich, E.

- CS Rockefeller Univ., New York, NY, USA
 SO Journal of Experimental Medicine (1978), 148(1), 223-34
 CODEN: JEMEAV; ISSN: 0022-1007
- DT Journal
 LA English
 CC 7-2 (Enzymes)
- AB A variety of cell lines and body fluids was screened for plasminogen activators, and the activity of **proteases** bound to .alpha.2-macroglobulin was studied after exposing the complexes to partial degrdn. and(or) denturing procedures to unmask proteolytic activity. Plasminogen activators in **urine** and cell culture media are generally of lower mol. wt. than those in plasma. **Proteases** bound to .alpha.2-macroglobulin recover the ability to attack macromol. substrates after exposure to Na dodecyl sulfate (SDS) while retaining the electrophoretic mobility of the **protease** inhibitor complex, indicating that the **protease** and inhibitor are probably linked by covalent bonds. However, other complexes formed between **proteases** and inhibitors of lower mol. wt. (such as soybean or Kunitz inhibitors) are fully dissocd. by SDS. The expts. were based on a new procedure for detecting proteolytic enzyme activity in SDS-polyacrylamide gels. The method relies on solns. of nonionic detergents for extg. SDS, after which the electrophoretic gel is applied to an indicator gel consisting of a fibrin-agar mixt. The method is sensitive, permitting the detection of **proteinases** in <1 .mu.L of fresh plasma. It is effective for resolving small differences in mol. wt. The procedure can be quantitated and was applied to a broad spectrum of serine enzymes and proenzymes, including some that function in the paths of fibrinolysis, coagulation, and kinin generation.
- ST **proteinase** detection property; macroglobulin **proteinase** complex activity
- IT Fibrinolysis
 (enzymes in, detection and mol. wt. of, sodium dodecyl sulfate-gel electrophoresis in relation to)
- IT Blood analysis
Urine analysis
 (plasminogen activators detection in, mol. wt. and sodium dodecyl sulfate-gel electrophoresis in relation to)
- IT Animal tissue culture
 (plasminogen activators of, detection and mol. wt. of, sodium dodecyl sulfate-electrophoresis in relation to)
- IT **Granuloma**
 Macrophage
Melanoma
Neoplasm, composition
Sarcoma
 (plasminogen activators of, detection and mol. wt. of, sodium dodecyl sulfate-gel electrophoresis in relation to)
- IT Macroglobulins
 RL: BIOL (Biological study)
 (.alpha.2-, of blood plasma, protein complexes with, sodium dodecyl sulfate effect on activity of)
- IT 9001-91-6
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (activators, detection and mol. wt. of, detergent-gel electrophoresis in)
- IT 9001-90-5D, .alpha.2-macroglobulin complexes 9002-07-7D,
 .alpha.2-macroglobulin complexes
 RL: PRP (Properties)
 (activity of, sodium dodecyl sulfate effect on)
- IT **9001-92-7 37259-58-8**
 RL: PRP (Properties)
 (detection and mol. wt. of, detergent-gel electrophoresis in)
- IT 9001-26-7 9002-04-4

- RL: ANT (Analyte); ANST (Analytical study)
(detection of, by detergent-gel electrophoresis)
- IT 151-21-3, analysis
RL: ANST (Analytical study)
(**proteinase** and macroglobulin-**proteinase** complex
detection by electrophoresis in gels contg.)
- L109 ANSWER 35 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1977:482760 HCAPLUS
DN 87:82760
TI Biochemical markers in human breast **cancer**
AU Coombes, R. C.; Powles, T. J.; Gazet, J. C.; Ford, H. T.; Sloane, J. P.;
Laurence, D. J. R.; Neville, A. M.
CS Unit Hum. Cancer Biol., Ludwig Inst. Cancer Res., London, UK
SO Lancet (1977), 1(8003), 132-4
CODEN: LANCAO; ISSN: 0140-6736.
DT Journal
LA English
CC 14-10 (Mammalian Pathological Biochemistry)
AB Nineteen biochem. parameters, most of which have been individually
advocated as **tumor**-index-substances for breast **cancer**,
were measured in 51 patients with breast disease, 42 of whom had active
breast **cancer**. Seven of these parameters were raised in >50% of
the 17 patients of the series with overt **metastases**; these were
serum ferritin (88%), C-reactive protein (87%), **carcinoembryonic**
antigen (81%), acid glycoprotein (75%), total alk. phosphatase (64%),
sialyl transferase (56%), and the urinary hydroxyproline/creatinine ratio
(73%). The incidence of biochem. abnormalities in patients in this group
compared favorably with the results of phys. methods of detecting
metastases. Seven of 16 other patients without evidence of
distant **metastases**, but who had a poor prognosis as judged by
histol. of the primary **tumor** and axillary lymph nodes, had
abnormalities of .gtoreq.1 of the 7 parameters. Three of these patients
have relapsed within a year of mastectomy. These biochem. tests could
assist in monitoring **metastatic** disease and could indicate at
the time of mastectomy, patients who might benefit from immediate systemic
therapy in addn. to local treatment of their breast **carcinomas**.
ST breast **cancer** biochem marker; mammary gland **cancer**
biochem marker
IT Blood plasma
Urine
(biochem. markers of, in **cancer** of mammary gland)
IT Ferritins
Haptoglobins
Hemopexins
Macroglobulins
RL: BIOL (Biological study)
(of blood plasma, in **cancer** of mammary gland)
IT **Cancer**
(of mammary gland, biochem. parameters of blood plasma and
urine in)
IT Proteins
RL: BIOL (Biological study)
(C-reactive, of blood plasma, in **cancer** of mammary gland)
IT Glycoproteins
RL: BIOL (Biological study)
(acid, of blood plasma, in **cancer** of mammary gland)
IT **Mammary gland**
(**neoplasm**, biochem. markers of blood plasma and urine
in)
IT Lactalbumins
(.alpha.-, of blood plasma, in **cancer** of mammary gland)
IT 9001-63-2 9001-78-9 9002-61-3 9007-12-9 9031-37-2

- 9041-92-3 9075-81-4
 RL: BIOL (Biological study)
 (of blood plasma, in **cancer** of mammary gland)
- IT 51-35-4 60-27-5 110-60-1 124-20-9
 RL: BIOL (Biological study)
 (of **urine**, in **cancer** of mammary gland)
- L109 ANSWER 36 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1965:76741 HCAPLUS
 DN 62:76741
 OREF 62:13621e-f
 TI Chemistry and immunology of urinary proteoses in **cancer**
 AU Raventos, E. B.; Leyton, G. R.; Simon, S. H.; Contreras, E. G.; Barriga,
 B. R.
 CS Bacteriol. Inst. Chile, Santiago
 SO Acta, Unio Intern. Contra Cancrum (1964), 20(4-5), 1141-5
 DT Journal
 LA English
 CC 66 (Mammalian Pathological Biochemistry)
 AB Cl3CCO2H precipitability, total polypeptides, and total carbohydrates in
 urinary proteoses were detd. Cl3CCO2H precipitability was higher in
 proteoses with a higher total polypeptide concn. and the ratio of total
 polypeptide to total carbohydrate was increased in **cancer**.
- IT **Cancer**
 (proteinases in urine in)
- IT **Urine**
 (proteinases in, in **cancer**)
- IT **Proteinases**
 (in **urine** in **cancer**)
- L109 ANSWER 37 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1965:76740 HCAPLUS
 DN 62:76740
 OREF 62:13621d-e
 TI Lactic dehydrogenase in **cancer**
 AU Hall, C.; Kaplan, N. O.; Wilder, G. H.
 CS Brandeis Univ., Waltham, MA
 SO Acta, Unio Intern. Contra Cancrum (1964), 20(4-5), 1101-4
 DT Journal
 LA English
 CC 66 (Mammalian Pathological Biochemistry)
 AB Lactic dehydrogenase was more frequently elevated in **cancer**
 patients than was alk. phosphatase or serum glutamic-oxalacetic
 transaminase. It was frequently elevated longer in **cancer** than
 in other diseases. Elevation in serum level paralleled the extent of the
 disease, but since the enzyme was low or normal in earlier localized
malignancies it was not suitable for screening populations.
 Height of the elevation may give a rough index to overall survival of
 patients. No patient with a level >500 units survived >30 days.
 Responses to therapy and progression of disease were frequently
 accompanied by falls and rises in serum levels. Nonbloody
malignant effusions tended to have higher levels than serum drawn
 simultaneously. Levels in cerebral spinal fluid in the presence of
 intracranial **tumors** remained lower than in serum.
- IT **Brain**
 (**cancer** of, lactic dehydrogenase in blood serum and
 cerebrospinal fluid in)
- IT **Cancer**
 (lactic dehydrogenase in blood serum in)
- IT **Blood serum**
 (lactic dehydrogenase in, in **cancer**)
- IT **Cerebrospinal fluid**
 (lactic dehydrogenase in, in **cancer** of brain)

IT **Cancer**
 (proteinases in urine in)
 IT **Urine**
 (proteinases in, in cancer)
 IT 9001-60-9, Lactic dehydrogenase
 (in cancer)

L109 ANSWER 38 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1962:412423 HCAPLUS

DN 57:12423

OREF 57:2576d-e

TI New results on the determination of specific **proteinases** of **cancer** patients by means of a modified Abderhalden proteolytic 2576 enzyme reaction

AU Tetzner, E.

SO Aertzliche Laboratorium (1962), 8, 76-85
 CODEN: AELAAH; ISSN: 0001-9526

DT Journal

LA German

CC 59 (Enzymes)

AB The Abderhalden reaction for detn. of specific **proteinases** in the blood and **urine** of **cancer** patients was modified by addn. of Trasylol which inhibited nonspecific **proteinases** and activated the **tumor-specific proteinases**.

IT **Blood**

Urine

(analysis, detn. of **proteinases**)

IT **Blood**

(analysis, detn. of trypsin)

IT **Cancer**

(**proteinase** detn. in blood and **urine** in)

IT **Blood**

Urine

(**proteinases** in, in **cancer**)

IT **Proteinases**

(detn. of, in blood and **urine** in **cancer**)

L109 ANSWER 39 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1962:4357 HCAPLUS

DN 56:4357

OREF 56:835d-e

TI The problem of the enzymology of urinary **proteases** as used in the biochemical **cancer** diagnosis-the so-called Nitsche-complex reaction

AU Bayerle, Hans; EbnerPutzar, Heide; Strohm, Christoph

CS Univ., Munich, Germany

SO Aertzliche Forschung (1961), 15, 291-6
 CODEN: ARZFAN; ISSN: 0001-9496

DT Journal

LA Unavailable

CC 71 (Mammalian Pathological Chemistry)

AB cf. preceding abstr. There is no rational theoretical basis for the Nitsche-complex reaction which uses fibrinolysis by **urine** as indication of the presence of a **carcinoma** (Nitsche, CA 47, 7571e). Fibrinolysis is not due to a **cancer-specific** enzyme but to a mixt. of various **proteases**.

IT **Fibrinolysis**

(by **urine** in **cancer**)

IT **Urine**

(fibrinolysis and **proteases** in, in **cancer**)

IT **Cancer**

(fibrinolysis and **proteinases** in **urine** in)

IT 92303-18-9, Purine, 6-[imidazol-4(or 5)-ylthio]-

(in immune response during inductive phase, hemagglutinin formation in relation to)

- L109 ANSWER 40 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1962:4356 HCAPLUS
 DN 56:4356
 OREF 56:835c-d
 TI The problem of the biochemical **cancer** diagnosis with urinary **proteases**-the so-called Nitsche-complex reaction
 AU Bayerle, Hans; Ebner-Putzar, Heidi; Strohm, Christoph
 CS Univ. Munich, Germany
 SO Aertzliche Forschung (1961), 15, 287-91
 CODEN: ARZFAN; ISSN: 0001-9496
 DT Journal
 LA Unavailable
 CC 71 (Mammalian Pathological Chemistry)
 AB cf. following abstr. The Nitsche-complex reaction (CA 47, 7571e) was used to test 388 cases with known pathol. conditions for the presence of **carcinoma**. The test is not specific for **cancer**, but it can be useful as an auxiliary diagnostic test. In a large no. of cases the test fails because of interfering substances in the **urine**.
 IT **Urine**
 (fibrinolysis and **proteases** in, in **cancer**)
 IT **Cancer**
 (fibrinolysis and **proteinases** in **urine** in)
 IT **Proteinases**
 (in **urine** in **cancer**, fibrinolysis and)
- L109 ANSWER 41 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1956:20870 HCAPLUS
 DN 50:20870
 OREF 50:4327g-h
 TI The detection of specific **proteinases** in **urine** in nutritive allergic shock by the Abderhalden catabolic enzyme reaction
 AU Tetzner, E.
 CS Kreiskrankenhaus, Soltau, Hannover, Germany
 SO Deutsche Medizinische Wochenschrift (1955), 80, 1735-6
 CODEN: DMWOAX; ISSN: 0012-0472
 DT Journal
 LA Unavailable
 CC 11E (Biological Chemistry: Nutrition)
 AB Urinary proteolytic activity of a human subject sensitive to legumin (I) was tested against I (pea protein), bean protein, **cancer** proteins, and human serum albumin. Following ingestion of sufficient I to produce an allergic reaction, **proteinase** activity against I, but not the other substrates, appeared in the **urine**.
 IT Allergy
 (**proteinases** in **urine** in)
 IT **Urine**
 (**proteinases** in, in allergy)
 IT **Proteinases**
 (in **urine**, in allergy)
- L109 ANSWER 42 OF 49 HCAPLUS COPYRIGHT 2003 ACS
 AN 1951:4252 HCAPLUS
 DN 45:4252
 OREF 45:747g-i
 TI Studies on urinary **proteases**. V. Fuch's **cancer** reaction with **urine** in place of blood serum
 AU Saito, Akira
 CS Imperial Kyushu Univ., Fukuoka
 SO Journal of Biochemistry (Tokyo, Japan) (1941), 33, 323-38
 CODEN: JOBIAO; ISSN: 0021-924X

DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB Blood contains specific enzymes which can hydrolyze foreign protein and also antienzymes which inhibit the enzymes from hydrolyzing the species specific proteins. The proteolytic enzymes which are responsible for the Fuchs **cancer** reaction pass through the renal epithelium but the antienzymes do not, with the result that **urine** contains only the enzymes, which can be pptd. with Me₂CO. The serum enzymes can be activated by adsorption in acid medium and removal of the antienzymes on aluminiferous earths (Tonerde-A). Therefore, **urine** can be used instead of serum. The enzymes are pptd. and the reaction is followed by detg. NH₂-N by the Folin procedure. The results of this **cancer** test agree to the extent of 90% with the clinical findings.

IT **Cancer**
(diagnosis of, Fuchs reaction for)

IT **Urine**
(proteases of)

IT **9014-01-1, Proteases 9014-01-1, Proteases**
(urinary)

L109 ANSWER 43 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1944:35456 HCAPLUS
DN 38:35456
OREF 38:5289e-g
TI The detection of protective enzymes in the **urine** of **tumor** patients with the aid of the Abderhalden reaction and an attempt to produce specific protective **proteinases** by means of x-rays

AU Merten, Richard
SO Zeitschrift fuer die Gesamte Experimentelle Medizin (1941), 109, 333-46
From: Chem. Zentr. I, 1479(1943).
CODEN: ZGEMAZ; ISSN: 0372-8722

DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB cf. C. A. 37, 3496.4. The production of a homogeneous **carcinoma** -protein substrate is very difficult. In each **cancer** patient are found portions of **urine** in which protective **proteinases** are absent or are present in insufficient concn. It was desired to prep. a substrate consisting only of **carcinoma** cells, and to increase the existing concn. of protective enzyme or to cause formation of the enzyme. Enzyme formation was effected by single exposures of the **tumor** region to small doses of x-rays. Repetition of the exposure increased the enzyme production. It may thus be possible to differentiate between **carcinomatous** and **noncarcinomatous** patients by means of the Abderhalden reaction.

L109 ANSWER 44 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1944:20957 HCAPLUS
DN 38:20957
OREF 38:3016i,3017a-c
TI Concentration and cleavage of Abderhalden's defense enzymes in **carcinoma** patients

AU Hinsberg, K.; Schleinzner, Beate
SO Zeitschrift fuer Krebsforschung (1942), 53, 35-46
From: Chem. Zentr. I, 166(1943).
CODEN: ZEKBAI; ISSN: 0301-1585

DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)

AB Abderhalden's defense enzymes from **urine** of **carcinoma** patients were sepd. into a protein and a low-mol.-wt. fraction by treatment in a circulating dialyzer by Manegold's method (C. A. 25, 5608), preferably at pH 5.5-6, for 2-3 days. After neutralization, neither the dialyzate nor the material remaining within the dialyzing app. showed enzymic activity, but when the 2 substances were mixed activity was evident. The inner liquid is thermolabile, the outer stable to heating at 100.degree. for 30 min. H. and S. postulated that the sepn. was into co- and apo-enzyme. Since, with many enzymes of which the co- and apo-enzymes are known, the specificity of action is detd. by the coenzyme, while the substrate specificity depends on the apoenzyme, an attempt was made to see if this was the case with regard to the defense enzymes. Investigations in which co- and apo-enzymes of 2 different defense enzymes were interchanged, however, had only slight success, since when the acetone ppt. of **urine** from **carcinoma** patients was worked up, the specificity became lost as the defense enzyme soln. was concd. The concd. enzyme soln. cleaved all **carcinoma** substrates nonspecifically. Strong cleavage was obtained by addn. of 1:20,000-1:100,000 trypsin (itself inactive) to apparently inactive defense **proteinases**.

L109 ANSWER 45 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1943:23512 HCAPLUS

DN 37:23512

OREF 37:3821a-b

TI Preparation of crystalline protective **proteinases** from the **urine** in mammary **carcinoma**

AU Winkler, Walter

SO Zeitschrift fuer die Gesamte Experimentelle Medizin (1941), 109, 670-8

From: Chem. Zentr. 1942, I, 3214.

CODEN: ZGEMAZ; ISSN: 0372-8722

DT Journal

LA Unavailable

CC 11G (Biological Chemistry: Pathology)

AB By the micromethod of the Abderhalden reaction specific decompn. of the **carcinoma** substrate was observed in mammary **carcinoma**.

A concd. enzyme soln. was obtained from the **urine** and from this crystals were recovered that showed a potent specific effect after activation by trypsin.

L109 ANSWER 46 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1943:21533 HCAPLUS

DN 37:21533

OREF 37:3496c-g

TI Appearance of protective **proteinases** in the **urine** of animals with inoculated **tumors** after Rontgen irradiation

AU Merten, Richard; Weissmuller, Paul

SO Fermentforschung (1941), 16, 371-6

CODEN: FEFOAG; ISSN: 0367-2034

DT Journal

LA Unavailable

CC 11G (Biological Chemistry: Pathology)

AB Brown-Pearce, Walker and Flexner-Jobling **carcinomas** were used in rat and rabbit expts. Six weeks after inoculation (after all had become negative to the Abderhalden reaction) all animals received Rontgen irradiation of 500 r. in the abdominal area. The animals, in which **metastasis** had begun, showed a breakdown of the Brown-Pearce substrate in the next urinary output. At a later stage of the disease 200-400 r. sufficed to make the Abderhalden reaction positive again. Irradiation of otherwise normal rabbits was followed by a breakdown of a Brown-Pearce **tumor**-substrate only after 750 r. The same conditions prevailed with Walker and Flexner-Jobling **carcinomas**

inoculated in rats. An effect upon the organ substrate could be clearly observed after irradiation of large Flexner-Jobling **carcinomas**. In this case both broke down after irradiation of the **carcinoma** substrate. It is, therefore, possible by regulating the size of the Rontgen dose as is done in the case of animals with induced **tumors**, to produce protective **proteinases** after specific irradiation of the **tumor** protein. The enzymes can also be produced after an injection of fresh or dried **tumor** tissue. The establishment of such an apparently nonspecific protective process appears to depend upon the quantity of freed protein, whether it be from **tumor** or from organ cells through irradiation or from the **tumor** protein depot after injection. The possibility that it is derived from a toxic injury to the organs has not been excluded.

L109 ANSWER 47 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1943:12260 HCAPLUS

DN 37:12260

OREF 37:2027f-i

TI The stability of defense **proteinases** and the gaging of the substrate for the Abderhalden reaction

AU Abderhalden, Rudolf

SO Fermentforschung (1939), 16, 210-14

CODEN: FEFOAG; ISSN: 0367-2034

DT Journal

LA Unavailable

CC 11A (Biological Chemistry: General)

AB Defense **proteinases** can be pptd. from **urine** with acetone and dried in powder form without loss to their activity and specificity. The acetone ppt. is centrifuged and dried in a vacuum desiccator over H2SO4 and P2O5, powdered fine and stored in glass containers. The dry acetone ppt. can be emulsified just like the fresh pptd. material; this assures a fine suspension to work with. By intensive grinding with 0.9% NaCl and letting the solns. stand 3-4 hrs. at 37.degree., the enzyme is extd. and centrifuged. The clear soln. is tested in the usual manner. These processes have great importance for the production of a collection of different enzyme preps., for instance, stomach **carcinoma** protein, liver protein, pneumococcus protein and others. The amt. of acetone ppt. from different **urines** varies from 4 to 28 mg. per 10 cc. **urine**.

L109 ANSWER 48 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1941:28112 HCAPLUS

DN 35:28112

OREF 35:4468b-c

TI Studies on urinary **protease**. IV. Occurrence of urinary **protease** in rabbit **sarcoma**

AU Tuno, Sigetada

SO Journal of Biochemistry (Tokyo, Japan) (1940), 32, 419-23

CODEN: JOBIAO; ISSN: 0021-924X

DT Journal

LA Unavailable

CC 11G (Biological Chemistry: Pathology)

AB The urinary **protease** was detd. in **urine** from healthy and sarcomatous rabbits as well as rabbits injected with boiled **sarcoma** protein. In all the healthy rabbits the reaction was neg. In rabbits inoculated with **sarcoma** the reaction, about a week later, became pos. while in the animals receiving injections of boiled **sarcoma** protein the reaction became pos. almost immediately. Cf. C. A. 26, 1628.

L109 ANSWER 49 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN 1941:28111 HCAPLUS

DN 35:28111

OREF 35:4467g-i,4468a-b
 TI Studies on urinary **protease**. III. **Cancer** diagnosis by urinary **protease**
 AU Tuno, Sigetada
 SO Journal of Biochemistry (Tokyo, Japan) (1940), 32, 371-88
 CODEN: JOBIAO; ISSN: 0021-924X
 DT Journal
 LA Unavailable
 CC 11G (Biological Chemistry: Pathology)
 AB Prepn. of substrate: Free strictly fresh **cancer** tissue from fat, etc., cut into small pieces, wash in water and leave about 6 hrs. in ice chest covered with distd. water. Rub in a mortar, wash with distd. H2O and transfer the material to very slightly acidified boiling water. Boil the material 5 times, pouring off the water each time. Treat with acetone, acetone-ether and ether, powder the dry defatted material and sterilize it at 80.degree.. Prepn. of **urine**: Use fresh morning **urine**, adjust the reaction to pH 7.0, filter and measure 30 cc. of sp. gr. 1020 into a centrifuge tube. For other sp. gr. adjust the quantity of **urine** according to a calcd. formula. Add an equal vol. acetone, centrifuge after 10 min. and dissolve the residue in 15.5 cc. 0.9% NaCl. Three 5-cc. samples of the enzyme soln. are employed with 10 mg. substrate. Incubate the tubes 45 hrs. at 37.degree., centrifuge and det. the amino acids in the supernatant fluid. Subtract the amino acid content of the 2 control tubes (which usually agree within the exptl. error) from that of the tube contg. the active enzyme and substrate. An increase of more than 0.25 mg. is regarded as pos. and of less than 0.24 mg. as neg. In 89% of **cancer** patients the results were pos. while in 97% of **noncancer** patients the results were neg. and the one patient with a pos. reaction was suspected to suffer from a **malignant** degeneration of ulcus ventriculus. In healthy persons the reaction was invariably neg. After surgical extirpation of the **tumor** the enzymic activity disappeared in about a week's time. The reaction is not reliable with albumin-contg. **urines** or with old **urine** specimens.

=> fil medline

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all tot

L141 ANSWER 1 OF 19 MEDLINE
 AN 1999035058 MEDLINE
 DN 99035058 PubMed ID: 9816210
 TI Proteases as prognostic markers in cancer.
 AU Duffy M J
 CS Nuclear Medicine Department, St. Vincent's Hospital, Dublin 4, Ireland.
 SO CLINICAL CANCER RESEARCH, (1996 Apr) 2 (4) 613-8. Ref: 73
 Journal code: 9502500. ISSN: 1078-0432.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)

- (REVIEW, TUTORIAL)
- LA English
 FS Priority Journals
 EM 199902
 ED Entered STN: 19990223
 Last Updated on STN: 20020420
 Entered Medline: 19990210
- AB It is the ability to invade and metastasize that ultimately determines the prognosis in cancer. Comprising one of the key groups of molecules involved in invasion and metastasis are **proteases** such as urokinase plasminogen activator and cathepsins B, D, and L, as well as various **metalloproteases**. These **proteases** catalyze degradation of the interstitial **matrix** and basement membranes, allowing cancer cells to invade locally and metastasize to distant sites. If **proteases** are directly and causally involved in cancer spread, they have the potential to be new prognostic markers in cancer. One of the best examples of a correlation between high levels of a **protease** in a primary tumor and poor prognosis is urokinase plasminogen activation in breast cancer. In this malignancy, the urokinase plasminogen activator is a strong and independent prognostic marker and may be a marker for axillary node-negative disease. The urokinase plasminogen activator may also be a prognostic marker in other cancers such as gastric, colorectal, lung, bladder, cervical, and ovarian cancers. In a number of studies, cathepsin D has been shown to be a prognostic factor in breast cancer. However, results with cathepsin D, especially when immunocytochemistry is used for its detection, are conflicting. Levels of cathepsin B, cathepsin L, and certain **metalloproteases** may also supply prognostic data in certain cancers, but results with these **proteases** are still preliminary.
- CT Check Tags: Animal; Human; Support, Non-U.S. Gov't
 Cathepsin B: ME, metabolism
 Cathepsin D: ME, metabolism
 Cathepsins: ME, metabolism
 Collagenases: ME, metabolism
 *Endopeptidases: ME, metabolism
 Gelatinase A
 Gelatinase B
 Gelatinases: ME, metabolism
 Metalloendopeptidases: ME, metabolism
 *Neoplasms: EN, enzymology
 Prognosis
 Tumor Markers, Biological
 Urinary Plasminogen Activator: ME, metabolism
- CN 0 (Tumor Markers, Biological); EC 3.4.- (Cathepsins); EC 3.4.- (Endopeptidases); EC 3.4.21.73 (Urinary Plasminogen Activator); EC 3.4.22.- (cathepsin L, rat); EC 3.4.22.- (cathepsin L, transformed mouse fibroblasts); EC 3.4.22.1 (Cathepsin B); EC 3.4.22.15 (cathepsin L); EC 3.4.23.5 (Cathepsin D); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (Collagenases); EC 3.4.24.- (Gelatinases); EC 3.4.24.24 (Gelatinase A); EC 3.4.24.35 (Gelatinase B)
- L141 ANSWER 2 OF 19 MEDLINE
- AN 96389905 MEDLINE
 DN 96389905 PubMed ID: 8796999
 TI Urokinase plasminogen activator as a predictor of aggressive disease in breast cancer.
 AU Duffy M J; Duggan C; Maguire T; Mulcahy K; Elvin P; McDermott E; Fennelly J J; O'Higgins N
 CS Department of Nuclear Medicine, St. Vincent's Hospital, Dublin, Ireland.
 SO ENZYME AND PROTEIN, (1996) 49 (1-3) 85-93.
 Journal code: 9422761. ISSN: 1019-6773.
 CY Switzerland
 DT Journal; Article; (JOURNAL ARTICLE)

LA English
 FS Priority Journals
 EM 199612
 ED Entered STN: 19970128
 Last Updated on STN: 20000303
 Entered Medline: 19961203

AB Urokinase plasminogen activator (uPA) is a multifunctional protein involved in both extracellular proteolysis and signal transduction. uPA usually mediates its actions while attached to a membrane-bound receptor, termed uPAR. In this study, uPA and its receptor were measured at both protein and mRNA levels in breast cancer. At both levels, concentrations of uPA were significantly correlated with those for uPAR. uPA levels also correlated significantly with cathepsin B and cathepsin D but not with cathepsin L, **MMP-8** or **MMP-9** levels. Irrespective of the cut-off point used (e.g., median, tertile or quartile values), uPA was a significant prognostic marker for breast cancer.

CT Check Tags: Female; Human; Support, Non-U.S. Gov't
 Blotting, Northern
 *Breast Neoplasms: PA, pathology
 Enzyme-Linked Immunosorbent Assay
 *Plasminogen Activators: AN, analysis
 Prognosis
 RNA, Messenger: ME, metabolism
 *Urinary Plasminogen Activator: AN, analysis

CN 0 (RNA, Messenger); EC 3.4.21.- (Plasminogen Activators); EC 3.4.21.73 (Urinary Plasminogen Activator)

L141 ANSWER 3 OF 19 MEDLINE
 AN 96089015 MEDLINE
 DN 96089015 PubMed ID: 7491516
 TI Increased plasminogen activator and type IV collagenase activity in invasive follicular thyroid carcinoma cells.
 AU Packman K S; Demeure M J; Doffek K M; Wilson S D
 CS Department of Surgery, Medical College of Wisconsin, Milwaukee 53226, USA.
 SO SURGERY, (1995 Dec) 118 (6) 1011-6; discussion 1016-7.
 Journal code: 0417347. ISSN: 0039-6060.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Abridged Index Medicus Journals; Priority Journals
 EM 199601
 ED Entered STN: 19960125
 Last Updated on STN: 20000303
 Entered Medline: 19960104

AB BACKGROUND. An essential difference between benign and malignant follicular thyroid tumors is the ability to invade and metastasize. Thyrotropin (TSH) stimulates invasion of cultured human follicular thyroid cancer cells (FTC-133) via a protein kinase C (PKC) dependent mechanism. Tumor invasion depends on degradation of extracellular matrix by proteases. METHODS. We analyzed protease activity in FTC-133 and its more invasive clone, FTC-238. Cells were treated with TSH or 12-0-tetradecanoyl-phorbol-13-acetate (TPA), a PKC agonist, for 24 hours. Conditioned medium and cellular extract were subjected to substrate gel zymography with either casein-plasminogen or gelatin (collagen). Western blot and immunohistochemistry confirmed protease identity. RESULTS. We found increased 50 kd urokinase-like plasminogen activator (uPA) and 62 kd gelatinase activity by FTC-238 cells compared with the less invasive FTC-133 cells. There was no effect of TSH on uPA or collagenase activity at concentrations of 0.01 to 10 mU/ml. In both FTC-133 and FTC-238, TPA incubations of 0.1 to 100 ng/ml caused a dose-dependent increase in uPA and a 94 kd type IV collagenase. CONCLUSIONS. These findings show that TSH-stimulated invasion may be due to PKC-induced activation of uPA and 94 kd type IV collagenase.

uPA and basement membrane type IV **collagenase** warrant investigation as markers for follicular thyroid cancer.

CT Check Tags: Human; Support, Non-U.S. Gov't

*Adenoma: EN, enzymology
 Adenoma: PA, pathology
 *Collagenases: ME, metabolism
 Gelatinases: ME, metabolism
 Neoplasm Invasiveness
 Protein Kinase C: ME, metabolism
 *Thyroid Neoplasms: EN, enzymology
 Thyroid Neoplasms: PA, pathology
 Thyrotropin: PD, pharmacology
 Tumor Cells, Cultured
 *Urinary Plasminogen Activator: ME, metabolism

RN 9002-71-5 (Thyrotropin)

CN EC 2.7.1.37 (Protein Kinase C); EC 3.4.21.73 (Urinary Plasminogen Activator); EC 3.4.24.- (Collagenases); EC 3.4.24.- (Gelatinases)

L141 ANSWER 4 OF 19 MEDLINE

AN 96083717 MEDLINE

DN 96083717 PubMed ID: 7591285

TI Over-expression of tissue inhibitor of **matrix metalloproteinases** (TIMP1 and TIMP2) suppresses extravasation of pulmonary metastasis of a rat bladder carcinoma.

AU Kawamata H; Kawai K; Kameyama S; Johnson M D; Stetler-Stevenson W G; Oyasu R

CS Department of Pathology, Northwestern University Medical School, Chicago, IL 60611, USA.

NC CA14649 (NCI)

SO INTERNATIONAL JOURNAL OF CANCER, (1995 Nov 27) 63 (5) 680-7.
 Journal code: 0042124. ISSN: 0020-7136.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199512

ED Entered STN: 19960124
 Last Updated on STN: 20000303
 Entered Medline: 19951228

AB The balance between **matrix metalloproteinases** and their inhibitors is a critical factor which affects tumor invasion and metastasis. We have established a rat bladder carcinoma cell line, LMC19, which is tumorigenic, invasive and metastatic to the retroperitoneal lymph nodes and to the lungs in nude mice. LMC19 cells secrete pro-gelatinases A and B as well as tissue inhibitors of **matrix metalloproteinase** (TIMP1 and TIMP2). We conducted the present study to determine whether or not over-expression of TIMP1 and TIMP2 can affect the metastatic potential of LMC19 cells. We transfected the cells with an expression vector containing TIMP1 or TIMP2 cDNA, isolated several clones over-expressing TIMP1 or TIMP2 and assessed their invasive and metastatic potential by inoculation at an orthotopic site (**urinary bladder**) in nude mice. Our results show that the transfectants over-expressing TIMP1 and TIMP2 marginally affect primary tumor growth, local invasion or metastasis to the retroperitoneal lymph nodes but significantly inhibit extravascular growth of pulmonary tumor emboli. Our results suggest that the net activity of **matrix metalloproteinases** of tumor cells may be a critical factor that controls extravasation at this distant metastatic site.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

*Bladder Neoplasms: ME, metabolism
 Bladder Neoplasms: PA, pathology

Cell Division
 Enzyme Precursors: ME, metabolism
 Gelatin: ME, metabolism
 Gelatinases: ME, metabolism
 *Glycoproteins: BI, biosynthesis
 Glycoproteins: GE, genetics
 Immunohistochemistry
 Lung Neoplasms: BL, blood
 ***Lung Neoplasms: ME, metabolism**
 ***Lung Neoplasms: SC, secondary**
 Metalloendopeptidases: ME, metabolism
 Mice
 Mice, Nude
 ***Neoplasm Circulating Cells: ME, metabolism**
 Neoplasm Circulating Cells: PA, pathology
 Neoplasm Transplantation
 *Proteins: BI, biosynthesis
 Proteins: GE, genetics
 RNA, Messenger: GE, genetics
 RNA, Messenger: ME, metabolism
 Rats
 Tissue Inhibitor of Metalloproteinases
 Tissue Inhibitor-of Metalloproteinase-2
 Transfection
 Tumor Cells, Cultured
 RN 127497-59-0 (**Tissue Inhibitor-of Metalloproteinase-2**); 9000-70-8
 (Gelatin)
 CN 0 (Enzyme Precursors); 0 (Glycoproteins); 0 (Proteins); 0 (RNA,
 Messenger); 0 (Tissue Inhibitor of **Metalloproteinases**); EC
 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Gelatinases**); EC
 3.4.24.- (progelatinase)

 L141 ANSWER 5 OF 19 MEDLINE
 AN 96074746 MEDLINE
 DN 96074746 PubMed ID: 7591268
 TI Marked acceleration of the metastatic phenotype of a rat bladder carcinoma
 cell line by the expression of human **gelatinase A**.
 AU Kawamata H; Kameyama S; Kawai K; Tanaka Y; Nan L; Barch D H;
 Stetler-Stevenson W G; Oyasu R
 CS Department of Pathology, Northwestern University Medical School, Chicago,
 IL 60611, USA.
 NC CA14649 (NCI)
 SO INTERNATIONAL JOURNAL OF CANCER, (1995 Nov 15) 63 (4) 568-75.
 Journal code: 0042124. ISSN: 0020-7136.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199512
 ED Entered STN: 19960124
 Last Updated on STN: 20000303
 Entered Medline: 19951228
 AB Numerous studies have reported a correlation between the production of
gelatinases A and B by cancer cells and invasive and metastatic
 potential. It has been suggested that the expression of
gelatinase A (72-kDa type IV **collagenase**) is associated
 more closely with the metastatic phenotype of malignant cells in vitro and
 in vivo than that of **gelatinase B** (92-kDa type IV
collagenase). We have established a rat bladder carcinoma cell
 line, MYU3L, which is tumorigenic and locally invasive but is not
 metastatic to the distal organs in nude mice. The MYU3L cell line
 secretes pro-**gelatinase B** but not any detectable level of pro-
gelatinase A. We undertook the present study to determine whether

over-expression of **gelatinase A** can affect the metastatic potential of MYU3L cells. We transfected MYU3L cells with an expression vector containing human pro-**gelatinase A** cDNA under the transcriptional control of the SR alpha promoter. Two stable transfectants over-expressing **gelatinase A** activity were isolated. We assessed the biological behavior of the transfectants by an orthotopic site (**urinary bladder**) inoculation and an i.v. injection in nude mice. Our results demonstrate that the induced expression of human **gelatinase A** enzyme markedly accelerates the metastatic phenotype of the rat bladder carcinoma cell line MYU3L. Our results suggest that **gelatinase A** produced by tumor cells plays a major role in the metastatic process.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Antibodies

*Bladder Neoplasms: EN, enzymology

Bladder Neoplasms: GE, genetics

*Bladder Neoplasms: PA, pathology

Cell Division: PH, physiology

Collagen: ME, metabolism

DNA, Neoplasm: GE, genetics

Enzyme Precursors: GE, genetics

Gelatinase A

Gelatinases: GE, genetics

*Gelatinases: ME, metabolism

Immunohistochemistry

Lung Neoplasms: SC, secondary

Lymphatic Metastasis

Metalloendopeptidases: GE, genetics

*Metalloendopeptidases: ME, metabolism

Mice

Mice, Nude

Neoplasm Invasiveness

Neoplasm Metastasis: GE, genetics

Neoplasm Transplantation

Phenotype

Promoter Regions (Genetics)

Proteins: ME, metabolism

Rats

Tissue Inhibitor-of Metalloproteinase-2

Transfection

Tumor Cells, Cultured

RN 127497-59-0 (**Tissue Inhibitor-of Metalloproteinase-2**); 9007-34-5

(Collagen)

CN 0 (Antibodies); 0 (DNA, Neoplasm); 0 (Enzyme Precursors); 0 (Proteins); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Gelatinases**); EC 3.4.24.- (progelatinase); EC 3.4.24.24 (**Gelatinase A**)

L141 ANSWER 6 OF 19 MEDLINE

AN 94313764 MEDLINE

DN 94313764 PubMed ID: 8039304

TI Expression of 72 kDa type IV collagenase and invasion activity of human glioma cells.

AU Abe T; Mori T; Kohno K; Seiki M; Hayakawa T; Welgus H G; Hori S; Kuwano M

CS Department of Biochemistry, Kyushu University School of Medicine, Japan.

NC 35805

SO CLINICAL AND EXPERIMENTAL METASTASIS, (1994 Jul) 12 (4) 296-304.

Journal code: 8409970. ISSN: 0262-0898.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199408

- ED Entered STN: 19940905
Last Updated on STN: 20000303
Entered Medline: 19940823
- AB **Metalloproteinases**, inhibitors of **metalloproteinases**, plasminogen activators, inhibitors of plasminogen activators and cathepsins are thought to be involved in invasion by tumor cells. Glioblastoma multiforme is highly malignant and extremely refractory to therapy. One reason is because of its highly invasive nature within the nervous system. However, it remains unclear how invasion/dissemination of glioblastoma multiforme proceeds. In this study, we attempted to determine which **proteinases** were responsible for the invasion activity of human glioma cell lines in vitro. Nine human glioma cell lines (NHG1, NHG2, IN157, IN301, IN500, U251, U343, T98G and CCF-STTG1) derived from patients with glioma were grown in culture and used. We compared the invasion activity of glioma cell lines in a Matrigel invasion assay system, and formulated the activity as invasion index (%). Among the nine cell lines, IN157, IN500 and U343 showed less than 10% invasion activity (low group); NHG1, IN301 and CCF-STTG1 showed 10-25% activity (intermediate group); NHG2, U251 and T98G showed more than 30% activity (high group). Addition of an inhibitor of **metalloproteinases**, TIMP-1, to the assay system was found to significantly inhibit invasion activity of T98G cells ($P < 0.01$). Northern blot analysis demonstrated expression of urokinase-type plasminogen activator (uPA), tissue-type PA (tPA) and PA inhibitor-1 (PAI-1) in some of the above cell lines. Cellular levels of PAs and their inhibitor mRNA, however, appeared not to be correlated with invasion activity in most glioma cell lines except for CCF-STTG1. Expression of 72 kDa type IV **collagenase** (MMP-2) was much lower in IN157, IN500 and U343 than other cell lines, whereas expression of TIMP-1 was much higher in IN500 than in other cell lines. Zymographic activity was found to be comparable to MMP-2 mRNA levels in all cell lines except for CCF-STTG1. Type IV collagenolytic activity was also comparable to invasion activity in nine cell lines. These observations suggest the role of type IV **collagenase** and its inhibitors in determining capacity for invasion by human gliomas. However, a comprehensive analysis both in vitro and in vivo is required to confirm the role for this enzyme in glioma cell invasiveness.
- CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
*Collagenases: ME, metabolism
Gelatinase A
Gelatinase B
Gelatinases: GE, genetics
Gelatinases: ME, metabolism
Gene Expression
*Glioma: EN, enzymology
Glycoproteins: GE, genetics
Glycoproteins: ME, metabolism
Metalloendopeptidases: GE, genetics
Metalloendopeptidases: ME, metabolism
Neoplasm Invasiveness
Plasminogen Activator Inhibitor 1: GE, genetics
Proteins: GE, genetics
Proteins: ME, metabolism
RNA, Messenger: GE, genetics
Tissue Inhibitor of Metalloproteinases
Tissue Inhibitor-of Metalloproteinase-2
Tissue Plasminogen Activator: GE, genetics
Tumor Cells, Cultured
Urinary Plasminogen Activator: GE, genetics
RN 127497-59-0 (Tissue Inhibitor-of Metalloproteinase-2)
CN 0 (Glycoproteins); 0 (Plasminogen Activator Inhibitor 1); 0 (Proteins); 0 (RNA, Messenger); 0 (Tissue Inhibitor of **Metalloproteinases**); EC 3.4.21.68 (Tissue Plasminogen Activator); EC 3.4.21.73 (Urinary

Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (Collagenases); EC 3.4.24.- (Gelatinases); EC 3.4.24.24 (Gelatinase A); EC 3.4.24.35 (Gelatinase B)

L141 ANSWER 7 OF 19 MEDLINE
 AN 93346113 MEDLINE
 DN 93346113 PubMed ID: 8344748
 TI Enhanced expression of a tumor-cell-derived collagenase-stimulatory factor in urothelial carcinoma: its usefulness as a tumor marker for bladder cancers.
 AU Muraoka K; Nabeshima K; Murayama T; Biswas C; Kono M
 CS Department of Pathology, Miyazaki Medical College, Japan.
 NC CA 38817 (NCI)
 SO INTERNATIONAL JOURNAL OF CANCER, (1993 Aug 19) 55 (1) 19-26.
 Journal code: 0042124. ISSN: 0020-7136.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199309
 ED Entered STN: 19930924
 Last Updated on STN: 19970203
 Entered Medline: 19930903
 AB A mouse monoclonal antibody (Mab) E11F4, previously raised against the tumor-cell-derived collagenase-stimulatory factor (TCSF) from LX-1 human lung-carcinoma cells, has been used to define the expression and distribution of TCSF in human non-neoplastic urothelium and tumors of the urinary bladder. Immunohistochemically, TCSF was detected in 27/28 transitional-cell carcinomas (TCC) of the bladder, of which 23 were judged to be positive for TCSF according to objective criteria. Twenty-four of 28 non-neoplastic urothelium from 22 individuals were judged to be negative for TCSF by this criteria. However, TCSF immunostaining that was confined to the superficial umbrella cells was frequently observed in non-neoplastic urothelium. In bladder carcinomas, TCSF was in most cases demonstrated in the majority of cells, including at the invasion front. Its localization to the cell membrane was demonstrated by immunoelectron microscopy. The high level of expression of TCSF in bladder tumors, but not in non-neoplastic urothelium, was also demonstrated by immunoblotting of tissue extracts. Furthermore, E11F4 immunostaining identified tumor cells obtained from bladder washings or voided urine and detected more TCC cases than conventional cytology. Since TCSF immunostaining was positive even in low-grade TCC (immunohistochemically and immunocytochemically in 4/5 TCC grade I), the application of TCSF immunostaining to urine cytology appears promising as a valuable adjunct to conventional methods in the clinical evaluation of patients with TCC.
 CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
 *Bladder Neoplasms: CH, chemistry
 Bladder Neoplasms: DI, diagnosis
 Bladder Neoplasms: UR, urine
 *Carcinoma, Transitional Cell: CH, chemistry
 Carcinoma, Transitional Cell: DI, diagnosis
 Carcinoma, Transitional Cell: UR, urine
 Immunoblotting
 Immunoenzyme Techniques
 *Membrane Glycoproteins: AN, analysis
 Membrane Glycoproteins: BI, biosynthesis
 Membrane Glycoproteins: UR, urine
 Microscopy, Immunoelectron
 Tumor Cells, Cultured
 *Tumor Markers, Biological: AN, analysis
 Tumor Markers, Biological: BI, biosynthesis
 Tumor Markers, Biological: UR, urine

Urine: CY, cytology

CN 0 (Membrane Glycoproteins); 0 (Tumor Markers, Biological); 0 (tumor cell **collagenase** stimulating factor)

L141 ANSWER 8 OF 19 MEDLINE

AN 93306657 MEDLINE

DN 93306657 PubMed ID: 8319225

TI Tumor cell-derived **collagenase**-stimulatory factor increases expression of interstitial **collagenase**, **stromelysin**, and 72-kDa **gelatinase**.

AU Kataoka H; DeCastro R; Zucker S; Biswas C

CS Department of Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, Massachusetts 02111.

NC CA 38817 (NCI)

SO CANCER RESEARCH, (1993 Jul 1) 53 (13) 3154-8.

Journal code: 2984705R. ISSN: 0008-5472.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199307

ED Entered STN: 19930813

Last Updated on STN: 20000303

Entered Medline: 19930730

AB The tumor cell-derived **collagenase**-stimulatory factor (TCSF) was previously purified from human lung carcinoma cells (S. M. Ellis, K. Nabeshima, and C. Biswas, Cancer Res., 49: 3385-3391, 1989). This protein is present on the surface of several types of human tumor cells in vitro and in vivo and stimulates production of interstitial **collagenase** in human fibroblasts. In this study it is shown that TCSF stimulates expression in human fibroblasts of mRNA for **stromelysin 1** and 72-kDa **gelatinase**/type IV **collagenase**, as well as for interstitial **collagenase**. Measurement of enzyme protein by immunoassay showed that the amounts of interstitial **collagenase** and **stromelysin 1** were increased in TCSF-treated fibroblasts; gelatin zymography indicated that there was an increase in the 72-kDa **gelatinase**. These results indicate that tumor cell interaction with fibroblasts via TCSF could lead to increased degradation of interstitial or basement membrane matrix components and thus to enhanced tumor cell invasion.

CT Check Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

Blotting, Northern

*Collagenases: GE, genetics

DNA Probes

Extracellular Matrix: DE, drug effects

Extracellular Matrix: ME, metabolism

Fibroblasts: DE, drug effects

Fibroblasts: PH, physiology

Gelatinase B

*Gene Expression: DE, drug effects

Gene Expression: GE, genetics

Immunoenzyme Techniques

Interstitial Collagenase

*Lung Neoplasms: EN, enzymology

*Lung Neoplasms: GE, genetics

*Membrane Glycoproteins: PD, pharmacology

*Metalloendopeptidases: GE, genetics

Mice

Mice, Nude

*Neoplasm Proteins: GE, genetics

RNA, Messenger: GE, genetics

RNA, Messenger: ME, metabolism

Stimulation, Chemical

Stromelysin 1**Tumor Markers, Biological****Urinary Plasminogen Activator: GE, genetics**

CN 0 (DNA Probes); 0 (Membrane Glycoproteins); 0 (Neoplasm Proteins); 0 (RNA, Messenger); 0 (Tumor Markers, Biological); 0 (tumor cell collagenase stimulating factor); EC 3.4.21.73 (**Urinary Plasminogen Activator**); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (Collagenases); EC 3.4.24.17 (**Stromelysin 1**); EC 3.4.24.35 (**Gelatinase B**); EC 3.4.24.7 (Interstitial Collagenase)

L141 ANSWER 9 OF 19 MEDLINE

AN 93293388 MEDLINE

DN 93293388 PubMed ID: 8514458

TI Role of plasminogen activators, **metalloproteinases** and the tissue inhibitor of **metalloproteinase-1** in the metastatic process of human salivary-gland adenocarcinoma cells.

AU Azuma M; Tamatani T; Fukui K; Yoshida H; Kamogashira T; Ogino K; Suzuki T; Sato M

CS Second Department of Oral and Maxillofacial Surgery, Tokushima University School of Dentistry, Japan.

SO INTERNATIONAL JOURNAL OF CANCER, (1993 Jun 19) 54 (4) 669-76.
Journal code: 0042124. ISSN: 0020-7136.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199307

ED Entered STN: 19930806

Last Updated on STN: 20000303

Entered Medline: 19930722

AB An in vitro system has been established in which conversion from non-metastasizing to metastasizing adenocarcinoma cells can be induced, and subsequently subjected to analysis of the expression of **proteases** and tissue inhibitor of **metalloproteinases-1** (TIMP-1). A human salivary-gland adenocarcinoma cell clone HSGc, with no metastatic ability, was exposed to N-methyl-N-nitrosourea (MNU). Following exposure to MNU, cells with altered morphology were cloned. Upon s.c. inoculation into nude mice, MNU-treated HSGc clones formed metastatic foci in various organs, and then 5 metastasizing clones were isolated. Evaluation of expression of tissue-type plasminogen activator (tPA), urokinase-type plasminogen activator (uPA), **metalloproteinases** and TIMP-1 was performed by means of enzyme immunoassay, zymogram, or immunoblot. MNU-treated HSGc and metastasizing clones were found to secrete high levels of tPA, while HSGc produced undetectable levels of this enzyme. Expression of uPA was not observed in any of the cell clones. When the secretion of gelatinolytic enzymes was examined, metastasizing clones produced higher levels of 57- and 32-kDa, but not of 92- or 72-kDa **gelatinases**, as compared to HSGc cells. Although TIMP-1 was detected in all cell clones, metastasizing clones secreted less TIMP-1 than HSGc cells; in addition, one metastasizing clone produced TIMP-1 with a molecular weight distinct from that of 28-kDa TIMP-1. Our results suggest that the acquisition of metastatic ability by human salivary-gland tumor cells is closely associated with increased secretion of several **metalloproteinases** as well as decreased or altered TIMP-1 expression.

CT Check Tags: Animal; Female; Human; Support, Non-U.S. Gov't

Adenocarcinoma: EN, enzymology

Adenocarcinoma: PA, pathology

***Adenocarcinoma: SC, secondary**

*Glycoproteins: AN, analysis

*Metalloendopeptidases: AN, analysis

Methylnitrosourea

Mice

Mice, Nude

***Salivary Gland Neoplasms**

Salivary Gland Neoplasms: EN, enzymology

Salivary Gland Neoplasms: PA, pathology

Tissue Inhibitor of Metalloproteinases

*Tissue Plasminogen Activator: AN, analysis

Tumor Cells, Cultured

***Urinary Plasminogen Activator: AN, analysis**

RN 684-93-5 (Methylnitrosourea)

CN 0 (Glycoproteins); 0 (Tissue Inhibitor of Metalloproteinases);

EC 3.4.21.68 (Tissue Plasminogen Activator); EC 3.4.21.73 (Urinary

Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases)

L141 ANSWER 10 OF 19 MEDLINE

AN 93258146 MEDLINE

DN 93258146 PubMed ID: 1302559

TI **Urinary** type IV **collagenase**: elevated levels are associated with bladder transitional cell carcinoma.

AU Margulies I M; Hoyhtya M; Evans C; Stracke M L; Liotta L A; Stetler-Stevenson W G

CS Laboratory of Pathology, National Cancer Institute, NIH, Bethesda, Maryland 20892.

SO CANCER EPIDEMIOLOGY, BIOMARKERS AND PREVENTION, (1992 Sep-Oct) 1 (6) 467-74.

Journal code: 9200608. ISSN: 1055-9965.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199306

ED Entered STN: 19930625

Last Updated on STN: 20000303

Entered Medline: 19930617

AB Accumulating experimental evidence has linked the overproduction of extracellular **matrix**-degrading **metalloproteinases** with tumor cell invasion. In the present study one member of the **metalloproteinase** family, type IV **collagenase** (M(r) 72,000 **gelatinase**), is shown to be elevated in the **urine** of patients with transitional cell carcinoma of the bladder. The form of the enzyme in the **urine** was studied by three independent methods: enzyme-linked immunosorbent assay, Western immunoblotting; and gelatin zymography. Immunoblotting revealed that the enzyme was present as a series of fragments, each retaining the amino terminus of the mature proenzyme. A prominent M(r) 43,000 fragment was associated with the transitional cell carcinoma cases. Zymography demonstrated that multiple enzyme species with **gelatinase** activity were present in **urine** and that high-molecular-weight bands of substrate lysis corresponded to complexes between type IV **collagenase** and tissue inhibitor of **metalloproteinases** 2. The total amount of type IV **collagenase** antigen was significantly elevated in the **urine** of 37 transitional cell carcinoma patients (range, 0-1081 ng/ml; mean, 318.4 +/- 147.3) compared to 19 normal controls (P < or = 0.004) and 17 inflammatory disease controls (P < or = 0.011). Immunohistochemical staining of bladder tumor biopsies verified that the transitional cell carcinoma cells were producing the M(r) 72,000 enzyme. Thus, M(r) 72,000 type IV **collagenase**, which is present in the **urine** in many forms including fragments and complexes with inhibitors, may be a useful marker for bladder cancer diagnosis or prognosis.

CT Check Tags: Human; Male

Antibodies, Monoclonal

*Bladder Neoplasms: EN, enzymology
 Bladder Neoplasms: UL, ultrastructure
 Bladder Neoplasms: UR, urine
 Blotting, Western
 *Carcinoma, Transitional Cell: EN, enzymology
 Carcinoma, Transitional Cell: UL, ultrastructure
 Carcinoma, Transitional Cell: UR, urine
 Collagenases: AI, antagonists & inhibitors
 Collagenases: CL, classification
 *Collagenases: UR, urine
 Cystitis: EN, enzymology
 Cystitis: UR, urine
 Cytoplasm: EN, enzymology
 Cytoplasm: UL, ultrastructure
 Electrophoresis, Polyacrylamide Gel
 Enzyme-Linked Immunosorbent Assay
 Fluorescent Antibody Technique
 Gelatinase B
 Hematuria: EN, enzymology
 Hematuria: UR, urine
 Hypospadias: EN, enzymology
 Hypospadias: UR, urine
 Immunoenzyme Techniques
 Kidney Calculi: EN, enzymology
 Kidney Calculi: UR, urine
 Molecular Weight
 Papilloma: EN, enzymology
 Papilloma: UR, urine
 Spermatocele: EN, enzymology
 Spermatocele: UR, urine
 Urethritis: EN, enzymology
 Urethritis: UR, urine
 CN 0 (Antibodies, Monoclonal); EC 3.4.24.- (Collagenases); EC
 3.4.24.35 (Gelatinase B)
 L141 ANSWER 11 OF 19 MEDLINE
 AN 93189593 MEDLINE
 DN 93189593 PubMed ID: 8446598
 TI **Stromelysin 3** belongs to a subgroup of proteinases expressed in
 breast carcinoma fibroblastic cells and possibly implicated in tumor
 progression.
 AU Wolf C; Rouyer N; Lutz Y; Adida C; Lorient M; Bellocq J P; Chambon P;
 Basset P
 CS Laboratoire de Genetique Moleculaire des Eucaryotes, Centre National de la
 Recherche Scientifique, Strasbourg, France.
 SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
 AMERICA, (1993 Mar 1) 90 (5) 1843-7.
 Journal code: 7505876. ISSN: 0027-8424.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199304
 ED Entered STN: 19930416
 Last Updated on STN: 20000303
 Entered Medline: 19930408
 AB The expression of the **stromelysin 3 (ST3)** gene, which encodes a
 putative **matrix metalloproteinase**, was studied during
 breast cancer progression. The ST3 gene is expressed in all invasive
 breast carcinomas, in a number of their metastases, and in some in situ
 carcinomas where the probability of detecting ST3 transcripts correlates
 with the known risk of these carcinomas to become invasive. ST3 RNA and
 protein were specifically detected in fibroblastic cells immediately

surrounding the neoplastic cells in both primary and metastatic tumors. This expression pattern distinguishes the ST3 gene from other **matrix metalloproteinase** genes, most notably from the 72-kDa type IV **collagenase** gene, which can be expressed in fibroblastic cells distributed throughout the stroma of primary breast carcinomas. Furthermore, high levels of 72-kDa type IV **collagenase**, but not of ST3 transcripts, are detected in benign breast fibroadenomas. Interestingly, the urokinase and ST3 genes exhibit very similar patterns of expression in breast carcinomas, which suggests that their products may cooperate during cancer progression.

CT Check Tags: Human; Support, Non-U.S. Gov't

Adenoma: EN, enzymology

Adenoma: GE, genetics

Adenoma: PA, pathology

Biological Markers

Blotting, Northern

Breast Neoplasms: EN, enzymology

***Breast Neoplasms: GE, genetics**

Breast Neoplasms: PA, pathology

Carcinoma: EN, enzymology

***Carcinoma: GE, genetics**

Carcinoma: PA, pathology

Fibroblasts: EN, enzymology

Gene Expression Regulation, Neoplastic

In Situ Hybridization

*Metalloendopeptidases: GE, genetics

Neoplasm Metastasis

Prognosis

RNA, Messenger: GE, genetics

Urinary Plasminogen Activator: GE, genetics

CN 0 (Biological Markers); 0 (RNA, Messenger); EC 3.4.21.73 (Urinary Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (stromelysin 3)

L141 ANSWER 12 OF 19 MEDLINE

AN 92198395 MEDLINE

DN 92198395 PubMed ID: 1801751

TI Biological and clinical relevance of the urokinase-type plasminogen activator (uPA) in breast cancer.

AU Schmitt M; Goretzki L; Janicke F; Calvete J; Eulitz M; Kobayashi H; Chucholowski N; Graeff H

CS Frauenklinik, Technischen Universitat Munchen, Klinikum rechts der Isar, FRG.

SO BIOMEDICA BIOCHIMICA ACTA, (1991) 50 (4-6) 731-41.

Journal code: 8304435. ISSN: 0232-766X.

CY GERMANY: Germany, Federal Republic of

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199204

ED Entered STN: 19920509

Last Updated on STN: 20000303

Entered Medline: 19920423

AB Tumor cell invasion and metastasis is a multifactorial process, which at each step may require the action of proteolytic enzymes such as **collagenases**, cathepsins, plasmin, or plasminogen activators. An enzymatically inactive proenzyme form of the urokinase-type plasminogen activator (pro-uPA) is secreted by tumor cells which may be converted to an enzymatically active two-chain uPA-molecule (HMW-uPA) by plasmin-like enzymes. Action of proteases on pro-uPA may generate the enzymatically active or inactive high-molecular-weight form of uPA (HMW-uPA). Some proteases (plasmin, cathepsin B and L, kallikrein, trypsin or thermolysin) activate pro-uPA by cleaving the peptide bond Lys158 and Ile159. Other

proteases (elastase, thrombin) cleave pro-uPA at different positions to yield enzymatically inactive HMW-uPA. HMW-uPA may be split into the enzymatically active LMW-uPA and the enzymatically inactive ATF (amino terminal fragment). ATF may be cleaved between peptide sequence 20 and 40 within the receptor binding domain of uPA (GFD). Such impaired ATF does not bind to uPA-receptors. Action of the bacterial endoproteinase Asp-N from *Pseudomonas fragi* mutant on pro-uPA or HMW-uPA, however, generates intact ATF which efficiently competes for binding of HMW-uPA or pro-uPA to receptors on tumor cells. High uPA-antigen content (pro-uPA, HMW-uPA, or LMW-uPA) in breast cancer tissue (not in plasma) indicates an elevated risk for the patient of recurrences and shorter overall survival. Thus pro-uPA/uPA-antigen content in breast cancer tissue serves as an independent prognostic parameter for the outcome of the disease. Cathepsin D is also an independent prognostic factor for recurrences and overall survival. High content of cathepsin D in breast cancer tumors is, however, not correlated with elevated levels of pro-uPA/uPA indicating that synthesis and release of cathepsin D and pro-uPA/uPA are independent events.

CT Check Tags: Female; Human; Support, Non-U.S. Gov't
Binding Sites

*Breast Neoplasms: EN, enzymology

Breast Neoplasms: SC, secondary

Enzyme Precursors: ME, metabolism

Neoplasm Invasiveness

Peptide Fragments: ME, metabolism

Plasminogen Activators: ME, metabolism

Prognosis

*Urinary Plasminogen Activator: ME, metabolism

RN 99149-95-8 (saruplase)

CN 0 (Enzyme Precursors); 0 (Peptide Fragments); EC 3.4.21.- (Plasminogen Activators); EC 3.4.21.73 (Urinary Plasminogen Activator)

L141 ANSWER 13 OF 19 MEDLINE

AN 92135374 MEDLINE

DN 92135374 PubMed ID: 1966799

TI Influence of urokinase on cell proliferation and invasion.

AU Binder B R

CS Department of Clinical Experimental Physiology, University of Vienna, Austria.

SO BLOOD COAGULATION AND FIBRINOLYSIS, (1990 Dec) 1 (6) 717-20.

Ref: 38

Journal code: 9102551. ISSN: 0957-5235.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199203

ED Entered STN: 19920329

Last Updated on STN: 20000303

Entered Medline: 19920311

AB The urokinase-dependent plasminogen activating system is regulated not only by zymogen to enzyme conversion of pro-urokinase and inhibition of the active enzyme by plasminogen activator inhibitors, but also by regulated expression of urokinase receptors on the cell surface. Receptor-bound pro-urokinase in turn becomes activated and is capable of activating plasminogen probably bound site by site to urokinase to a cell surface receptor. Plasmin by itself or via activation of pro-collagenase to collagenase is capable of degrading the extracellular matrix, in turn mediating processes like invasion, metastasis and tumour growth. In addition, in some cell lines the urokinase-dependent system mediated via receptor-bound active urokinase is

also capable of eliciting a mitogenic response of the cells. Therefore, the urokinase-dependent plasminogen activating system might not only be responsible for mediating extravascular proteolysis but might also be an autocrine mitogen for some cell lines.

- CT Check Tags: Animal; Human
 *Cell Division
 Cell Division: DE, drug effects
 Enzyme Activation
 Enzyme Precursors: ME, metabolism
 Models, Biological
 *Neoplasm Invasiveness: PP, physiopathology
 *Plasminogen: ME, metabolism
 Plasminogen Inactivators: PD, pharmacology
 Receptors, Cell Surface: ME, metabolism
 Urinary Plasminogen Activator: AI, antagonists & inhibitors
 Urinary Plasminogen Activator: PD, pharmacology
 *Urinary Plasminogen Activator: PH, physiology
- RN 9001-91-6 (Plasminogen)
 CN 0 (Enzyme Precursors); 0 (Plasminogen Inactivators); 0 (Receptors, Cell Surface); 0 (plasminogen activator, urokinase receptors); EC 3.4.21.73 (Urinary Plasminogen Activator)
- L141 ANSWER 14 OF 19 MEDLINE
 AN 91162398 MEDLINE
 DN 91162398 PubMed ID: 2127427
 TI A new method for evaluation of **urinary** autocrine motility factor and tumor cell **collagenase** stimulating factor as markers for **urinary** tract cancers.
 AU Guirguis R; Javadpour N; Sharareh S; Biswas C; el-Amin W; Mansur I; Kim J S
 CS Georgetown University School of Medicine, Washington DC 20007.
 SO JOURNAL OF OCCUPATIONAL MEDICINE, (1990 Sep) 32 (9) 846-53.
 Journal code: 7502807. ISSN: 0096-1736.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199104
 ED Entered STN: 19910505
 Last Updated on STN: 19910505
 Entered Medline: 19910415
- AB Over the past several years, many tumor markers, including cell surface antigens, T-antigen, ras p55, and ras p52 proteins, have been studied as potential tumor markers of bladder cancer. The lack of specificity and inconsistency of these markers led us to develop a new method for studying the **urinary** excretion of autocrine motility factor (uAMF) and tumor cell **collagenase** stimulating factor (TCSF) in 24-hour and first morning voided specimens. AMF is a glycoprotein secreted by the malignant cells and is responsible for cell locomotion, a key event in invasion and metastases of the malignant cells. TCSF is a membrane bound glycoprotein of tumor cells that stimulates fibroblast **collagenase** production. We have utilized an enzyme-linked immunosorption assay to detect the levels of uAMF and TCSF in **urine** samples collected from normal volunteers, patients with benign diseases, and patients with bladder cancer. Our data indicate that **urinary** concentrations of uAMF and TCSF are elevated in patients with bladder cancer. Furthermore, the levels of uAMF and TCSF are more elevated in invasive tumors as compared with benign counterparts. We have localized uAMF and TCSF in bladder cancer cells, utilizing immunohistologic techniques.
- CT Check Tags: Human
 Autocrine Motility Factor
 Enzyme-Linked Immunosorbent Assay
 *Membrane Glycoproteins: UR, urine

***Neoplasm Proteins: UR, urine**
 Regression Analysis
 Single-Blind Method
***Tumor Markers, Biological: UR, urine**
***Urologic Neoplasms: DI, diagnosis**
 CN 0 (Autocrine Motility Factor); 0 (Membrane Glycoproteins); 0 (Neoplasm Proteins); 0 (Tumor Markers, Biological); 0 (tumor cell collagenase stimulating factor)

L141 ANSWER 15 OF 19 MEDLINE
 AN 88026657 MEDLINE
 DN 88026657 PubMed ID: 3664443
 TI A routine method for cytogenetic analysis of small **urinary** bladder tumor biopsies.
 AU Fraser C; Sullivan L D; Kalousek D K
 CS Terry Fox Laboratory, B.C. Cancer Research Centre, Vancouver, Canada.
 SO CANCER GENETICS AND CYTOGENETICS, (1987 Nov) 29 (1) 103-8.
 Journal code: 7909240. ISSN: 0165-4608.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198711
 ED Entered STN: 19900305
 Last Updated on STN: 19900305
 Entered Medline: 19871125

AB A method that allows routine cytogenetic analysis of small cystoscopic biopsies from urothelial tumors is described. This method is based on prolonged mild **collagenase** disaggregation, a 12-16 hour culture, and harvesting procedures adapted to give maximal metaphase recovery. In addition to providing a means for cytogenetic studies of small biopsies from **urinary** bladder tumors, this method provides the advantages of direct preparations, with chromosome morphology and banding sufficient for karyotypic analysis. Conventional cell synchronization techniques, applied to this system, should enable high-resolution banding and optimize analysis.

CT Check Tags: Human; Support, Non-U.S. Gov't
***Bladder Neoplasms: GE, genetics**
Bladder Neoplasms: PA, pathology
Carcinoma, Transitional Cell: GE, genetics
Carcinoma, Transitional Cell: PA, pathology
 Cells, Cultured
 Chromosome Banding
 Karyotyping
Neoplasm Metastasis
Prognosis

L141 ANSWER 16 OF 19 MEDLINE
 AN 85280304 MEDLINE
 DN 85280304 PubMed ID: 2992566
 TI Role for different cell proteinases in cancer invasion and cytolysis.
 AU Zucker S; Beck G; DiStefano J F; Lysik R M
 SO BRITISH JOURNAL OF CANCER, (1985 Aug) 52 (2) 223-32.
 Journal code: 0370635. ISSN: 0007-0920.
 CY ENGLAND: United Kingdom
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198510
 ED Entered STN: 19900320
 Last Updated on STN: 20000303
 Entered Medline: 19851015

AB The crucial role of non-plasminogen dependent serine **proteinases**

is tissue invasive and cytolytic functions of Walker 256 cancer cells has been documented using a rat **urinary** bladder invasion and a 125I-labelled fibroblast cytolysis assay. The invasive capacity of these cancer cells was abrogated by non toxic concentrations of the serine **proteinase** inhibitors, diisopropylfluorophosphate and phenylmethylsulfonylfluoride, but not by **metallo** or cysteine **proteinase** inhibitors. Although tumour cell **collagenase** activity and plasminogen activator were demonstrated, these proteolytic enzymes were not essential in these in vitro assays. These results suggest that different categories of **proteinases** play specific roles in the complicated process of cancer invasion.

CT Check Tags: Animal; Male; Support, U.S. Gov't, Non-P.H.S.
Bladder: PA, pathology
***Carcinoma 256, Walker: EN, enzymology**
Carcinoma 256, Walker: PA, pathology
Cell Communication
Cell Membrane: EN, enzymology
Cell Survival
Collagen: ME, metabolism
*Endopeptidases: ME, metabolism
Fibroblasts
Metalloendopeptidases
Microbial Collagenase: ME, metabolism
Neoplasm Invasiveness
Organ Culture
Plasminogen Activators: ME, metabolism
Protease Inhibitors
Rats
Rats, Inbred Strains
Serine Endopeptidases
Tumor Stem Cell Assay
RN 9007-34-5 (Collagen)
CN 0 (Protease Inhibitors); EC 3.4.- (Endopeptidases); EC 3.4.21 (Serine Endopeptidases); EC 3.4.21.- (Plasminogen Activators); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.3 (Microbial **Collagenase**)

L141 ANSWER 17 OF 19 MEDLINE
AN **85048707** MEDLINE
DN **85048707** PubMed ID: **6093995**
TI Cysteine proteinases and metastasis.
AU Sloane B F; Honn K V
NC CA29997 (NCI)
CA36481 (NCI)
SO CANCER METASTASIS REVIEWS, (1984) 3 (3) 249-63. Ref: 124
Journal code: 8302417. ISSN: 0167-7659.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198501
ED Entered STN: 19900320
Last Updated on STN: 20000303
Entered Medline: 19850103
AB Cysteine proteinases are a subclass of endopeptidases which require activation by thiol reagents. A tumor cysteine proteinase which appears to be related to lysosomal cathepsin B has been implicated in the ability of tumor cells to invade the extracellular matrix and to metastasize to secondary sites. Lysosomal cathepsin B can degrade such components of the extracellular matrix as collagen, fibronectin and proteoglycans. Activity of this cathepsin B-like cysteine proteinase (CB) has been correlated with tumor malignancy in a number of tumor lines yet not in all tumor lines studied. CB activity in tumors seems to be associated with the viable

tumor cells, probably with the plasma membrane of these tumor cells. CB activity has been measured in the sera, **urine**, ascites fluid and pancreatic fluid of tumor-bearing patients. CB is released from tumor explants and tumor cells in vitro as well as from normal subcutaneous tissue exposed to tumor-conditioned medium. Cathepsin B from normal tissues is rapidly inactivated above pH 7.0. Therefore, CB in tumor cell membranes or released from tumor cells (or from host cells in response to tumor cells) may not possess proteolytic activity at neutral pH and thus may not facilitate tumor cell invasion. However, CB exhibits enhanced stability at neutral or slightly alkaline pH's. There is not yet definitive proof that CB plays a role in tumor invasion and metastasis. There is, however, an increasing body of correlative evidence relating CB activity and tumor malignancy. This correlative evidence plus preliminary evidence that tumor CB can degrade components of the extracellular matrix in vitro suggests that CB may be one proteinase active in a proteolytic cascade resulting in tumor invasion and metastasis.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Cathepsin B
 Cathepsins
 Cell Membrane: EN, enzymology
 Cell Movement
 Cells, Cultured
 Cysteine Endopeptidases
 *Endopeptidases: ME, metabolism
 Endopeptidases: SE, secretion
 Lysosomes: EN, enzymology

Microbial Collagenase: ME, metabolism
***Neoplasm Metastasis: PP, physiopathology**
***Neoplasms: EN, enzymology**
Neoplasms: PA, pathology

CN EC 3.4.- (Cathepsins); EC 3.4.- (Endopeptidases); EC 3.4.22 (Cysteine Endopeptidases); EC 3.4.22.1 (Cathepsin B); EC 3.4.24.3 (Microbial Collagenase)

L141 ANSWER 18 OF 19 MEDLINE

AN 78056571 MEDLINE

DN 78056571 PubMed ID: 201108

TI [**Collagenase** activity in an animal and a human carcinoma (author's transl)].

Kollagenaseaktivitat in einem tierischen und einem menschlichen Karzinom.

AU Wirl G

SO WIENER KLINISCHE WOCHENSCHRIFT, (1977 Nov 25) 89 (22) 766-8.

Journal code: 21620870R. ISSN: 0043-5325.

CY Austria

DT Journal; Article; (JOURNAL ARTICLE)

LA German

FS Priority Journals

EM 197801

ED Entered STN: 19900314

Last Updated on STN: 19900314

Entered Medline: 19780127

AB High amounts of **collagenase** were found in chemically-induced carcinomas of the mouse skin and in carcinomas of the human **urinary** bladder. Part of the total enzyme activity was detected in the supernatant after sedimentation of the tumour homogenate at 6000 x g and dialysis for 48 hours. The remainder was extracted from the pellet by the use of 5 M urea. Though the localization of enzyme production and regulation of enzyme activity is still unclear, the **collagenases** may be implicated in the breakdown of collagen structures during tumour invasion.

CT Check Tags: Animal; Female; Human; Male

***Bladder Neoplasms: EN, enzymology**

English Abstract
 Mice
 *Microbial Collagenase: ME, metabolism
 Neoplasm Invasiveness
 *Skin Neoplasms: EN, enzymology
 CN EC 3.4.24.3 (Microbial Collagenase)

L141 ANSWER 19 OF 19 MEDLINE
 AN 76146773 MEDLINE
 DN 76146773 PubMed ID: 176412
 TI Epithelial cell cultures from normal and cancerous human tissues.
 AU Owens R B; Smith H S; Nelson-Rees W A; Springer E L
 SO JOURNAL OF THE NATIONAL CANCER INSTITUTE, (1976 Apr) 56 (4)
 843-9.
 Journal code: 7503089. ISSN: 0027-8874.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 197606
 ED Entered STN: 19900313
 Last Updated on STN: 19900313
 Entered Medline: 19760602

AB Thirty epithelial cell strains were isolated from human carcinomas and normal epithelial tissues by collagenase digestion and selective removal of fibroblasts with trypsin-Versene. Most strains were obtained from metastatic carcinomas or epithelia of the urinary and intestinal tracts. The success rate for growth of both neoplastic and normal tissues (excluding skin) was 38%. Six of these strains showed gross morphologic and chromosome changes typical of malignant cells. Nine resembled normal epithelium. The other 15 exhibited some degree of morphologic change from normal.

CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
 Cell Division
 Cell Separation
 *Cells, Cultured
 *Epithelial Cells
 *Epithelium
 Microbial Collagenase
 *Neoplasms
 Neoplasms: PA, pathology
 Trypsin
 CN EC 3.4.21.4 (Trypsin); EC 3.4.24.3 (Microbial Collagenase)

=> e matrix metalloproteinases+all/ct

E1	0	BT7	D Chemicals and Drugs/CT
E2	0	BT6	Chemical Actions and Uses/CT
E3	0	BT5	Chemical Actions/CT
E4	0	BT7	D Chemicals and Drugs/CT
E5	0	BT6	Enzymes, Coenzymes, and Enzyme Inhibitors/CT
E6	16823	BT5	Enzymes/CT
E7	5575	BT4	Hydrolases/CT
E8	18893	BT3	Peptide Hydrolases/CT
E9	17753	BT2	Endopeptidases/CT
E10	8414	BT1	Metalloendopeptidases/CT
E11	1664	-->	Matrix Metalloproteinases/CT
E12	7228	MN	D8.586.277.656.300.480.525./CT

EC EC 3.4.24.-
 DC an INDEX MEDICUS major descriptor
 NOTE A family of zinc-dependent
 METALLOENDOPROTEINASES that are involved in
 the degradation of EXTRACELLULAR MATRIX

components. EC 3.4.24.-.

INDX /antag is permitted but TISSUE INHIBITOR OF METALLOPROTEINASES is available; check MeSH for specific matrix metalloproteinases

AQ AD AE AI AN BI BL CF CH CL CS CT DE DF DU EC GE HI IM IP ME PD PH PK PO RESD SE ST TO TU UL UR

PNTE Metalloendopeptidases (1988-1999)

HNTE 2000

MHTH NLM (2000)

UF MMPs/CT

E13 0 NT1 Gelatinase A/CT

E14 2472 NT1 Gelatinase B/CT

E15 2699 NT1 Interstitial Collagenase/CT

E16 1183 NT1 Matrilysin/CT

E17 333 NT1 Neutrophil Collagenase/CT

E18 261 NT1 Stromelysin 1/CT

E19 1475

***** END***

=> d his

(FILE 'HOME' ENTERED AT 16:39:29 ON 02 JUL 2003)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 16:39:38 ON 02 JUL 2003

L1 319 S MMP

L2 1574 S (?METALLOPROTEASE? OR ?METALLOPROTEINASE?)/CNS

L3 532 S (MATRIX(L)?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS

L4 61 S L1 NOT L2,L3

L5 7 S L4 NOT SQL/FA

L6 54 S L4 NOT L5

L7 1709 S L2-L3,L6

L8 646 S (?GELATINASE? OR ?COLLAGENASE? OR ?STROMELYSIN?)/CNS

L9 2234 S L7,L8
E "E C E.4.24"/CN

L10 2255 S (?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS

L11 599 S L10 NOT L1-L9

L12 47 S L11 NOT SQL/FA

L13 2833 S L9-L12

FILE 'HCAPLUS' ENTERED AT 16:45:08 ON 02 JUL 2003

L14 29027 S L13

L15 17098 S ?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALLO?(L)(?PRO

L16 10664 S MATRIX(L)(?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALL

L17 8017 S MMP

L18 33659 S L14-L17
E MMP

L19 1660 S E4-E47

L20 33885 S L18,L19

L21 361 S L20 AND URINE
E URINE ANALYSIS/CT

L22 38262 S E3,E5
E E3+ALL
E E5+ALL

L23 80202 S E3

L24 250 S L20 AND L22,L23

L25 361 S L21,L24

L26 165 S L25 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)

FILE 'REGISTRY' ENTERED AT 16:51:19 ON 02 JUL 2003

L27 20501 S (?PROTEASE? OR ?PROTEINASE?)/CNS

L28 18229 S L27 NOT L13

FILE 'HCAPLUS' ENTERED AT 16:51:34 ON 02 JUL 2003

L29 115014 S L28
L30 140491 S ?PROTEASE? OR ?PROTEINASE?
L31 1638 S L29,L30 AND (URINE OR L22 OR L23)
L32 1079 S L31 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)
L33 1171 S L26,L32
L34 138 S L33 AND (?NEOPLAS? OR ?TUMOR? OR ?TUMOUR? OR ?MALIGN? OR ?MET
E NEOPLASM/CT
L35 26 S L33 AND E2-E30
L36 10 S L33 AND E41-E45,E47,E48,E53-E57
E E3+ALL
L37 11 S L33 AND E3-E8
L38 57 S L33 AND E2+NT
L39 3 S L33 AND E116+NT
L40 8 S L33 AND (E121+NT OR E122+NT)
L41 153 S L34-L40
E DIAGNOSIS/CT
L42 7719 S E5
E E3+ALL
L43 43875 S E2+NT
E E10+ALL
L44 10041 S E1
L45 17 S L33 AND L42-L44
L46 9 S L41 AND L45
SEL DN AN 1 3 6 7 8
L47 5 S E1-E15 AND L46
L48 4 S L46 NOT L47
E KIDNEY CANCER/CT
E E3+ALL
L49 6810 S E2+NT
E E2+ALL
L50 79 S E5
E SKIN CANCER/CT
E E3+ALL
L51 7669 S E2+NT
E E2+ALL
L52 209 S E5
L53 10853 S E30+NT
E E30+ALL
L54 400 S E4
E OVARY CANCER/CT
E E3+ALL
L55 10138 S E2+NT
E E2+ALL
L56 94 S E5
E PROSTATE CANCER/CT
L57 6430 S E10-E14,E16-E17,E22
L58 11706 S E25-E30
L59 246 S E33
E S E39,E40
E PROSTATE GLAND, DISEASE/CT
L60 3619 S E5
E PROSTATE CANCER/CT
E E3+ALL
L61 11706 S E2
E NERVOUS SYSTEM CANCER/CT
E E9+ALL
L62 1881 S E2
E E2+ALL
E E3+ALL
L63 683 S E47-E49,E52
E BREAST CANCER/CT
E E3+ALL
L64 31953 S E2

L65 10215 S E MAMMARY GLAND/CT
 L66 31953 S E4, E5, E7, E8, E15, E16, E22
 L67 6750 S E26-E35
 E40, E41
 E LUNG CANCER/CT
 E E3+ALL
 L68 21137 S E2+NT
 E E2+ALL
 L69 235 S E5
 E RETINAL CANCER/CT
 E RETINA CANCER/CT
 E EYE CANCER/CT
 E E3+ALL
 L70 1381 S E2+NT
 E E2+ALL
 L71 8 S E5
 L72 1489 S E3+NT (L) TUMOR?
 L73 772 S E3+NT (L) CANCER?
 E RETINA/CT
 E E3+ALL
 L74 95 S E2 (L) (TUMOR? OR NEOPLAS? OR CANCER?)
 E LIVER CANCER/CT
 E E25+ALL
 L75 24777 S E2+NT
 E E2+ALL
 L76 856 S E5
 E PANCREATIC CANCER/CT
 E E54+ALL
 L77 6243 S E2+NT
 E E2+ALL
 L78 21 S E5
 E BLADDER CANCER/CT
 L79 1388 S E12
 E E12+ALL
 E E3+ALL
 E LYMPHOMA/CT
 E E3+ALL
 L80 15103 S E7, E6+NT
 E DIGESTIVE TRACT CANCER/CT
 L81 325 S E7
 E E7+ALL
 E DIGESTIVE TRACT/CT
 L82 242 S E5
 L83 1684 S E29, E30
 E GASTROINTESTIN/CT
 E E27+ALL
 L84 1684 S E2
 L85 31 S L49-L84 AND L33
 L86 4 S L85 AND L42-L44
 E UROGENITAL CANCER/CT
 E E7+ALL
 L87 33122 S E4, E3+NT (L) (CANCER? OR NEOPLAS? OR TUMOR?)
 L88 21 S L87 AND L33
 L89 3 S L88 AND L42-L44
 L90 5 S L47, L86, L89
 L91 43 S L45, L48, L85, L88 NOT L90
 SEL DN AN 3 9 12-14 16-18 21 24 28 32 34-37 39-43
 L92 21 S L91 AND E1-E63
 L93 26 S L90, L92
 L94 113 S L41 NOT L88-L93
 SEL DN AN 2 7 9 16 25 26 47 81 89 90 93 94 95 96 98 101-105 107
 L95 22 S L94 AND E64-E129
 L96 48 S L93, L95 AND L14-L26, L29-L95

L97 43 S L96 AND (?TUMOR? OR ?TUMOUR? OR ?METAST? OR ?MALIGN? OR ?CANC
L98 5 S L96 NOT L97
SEL DN AN 1 5
L99 2 S L98 AND E130-E135
L100 45 S L97,L99
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 17:39:20 ON 02 JUL 2003
L101 26 S E136-E161

FILE 'HCAPLUS' ENTERED AT 17:39:40 ON 02 JUL 2003
E MOSES M/AU
L102 57 S E3,E4,E13-E15
E FREEMAN M/AU
L103 136 S E3,E20
L104 14 S E91
L105 52 S E108,E109,E112
E WIEDERSCHAIN D/AU
L106 20 S E4-E6
L107 39 S L102-L106 AND L20,L29,L30
L108 7 S L107 AND L31
L109 49 S L100,L108
SEL HIT RN L108

FILE 'REGISTRY' ENTERED AT 17:42:19 ON 02 JUL 2003
L110 10 S E1-E10
L111 26 S L101,L110

FILE 'REGISTRY' ENTERED AT 17:42:44 ON 02 JUL 2003
L112 11 S L111 AND L1-L13
L113 25 S L111 AND L27
L114 26 S L112,L113,L111

FILE 'HCAPLUS' ENTERED AT 17:43:57 ON 02 JUL 2003

FILE 'MEDLINE' ENTERED AT 17:44:52 ON 02 JUL 2003
L115 1270 S L13
L116 15559 S L15-L17
E MMP
L117 7300 S E3-E27
L118 15765 S L115-L117
L119 1157 S L112
L120 15765 S L118,L119
E MATRIX METALLOPROTEINASE/CT
E E15+ALL
L121 7228 S E11+NT
L122 21341 S GELATINASE OR COLLAGENASE OR MATRILYSIN OR NEUTROPHIL COLLAGEN
L123 15936 S L120-L122 AND PY<=1996
E URINE/CT
E E3+ALL
L124 151929 S E4+NT
L125 64 S L123 AND L124
L126 278 S L123 AND URIN?
L127 278 S L125,L126
L128 82 S L127 AND C4./CT
L129 3 S L128 NOT AB/FA
L130 79 S L128 NOT L129
SEL DN AN 1 8 15 16 17 36 43-47 59 61 67 73 76-79
L131 19 S L130 AND E1-E57
L132 61 S L127 AND E1./CT
L133 63 S L127 AND DI./CT
E TUMOR MARKER/CT
L134 12 S E11+NT AND L127

L135 . 112 S L132-L134
L136 56 S L135 AND L128
L137 16 S L131 AND L136
L138 3 S L131 NOT L137
L139 19 S L137,L138
L140 40 S L136 NOT L131,L139
L141 19 S L139 AND L115-L140

FILE 'MEDLINE' ENTERED AT 17:57:40 ON 02 JUL 2003
E MATRIX METALLOPROTEINASES+ALL/CT